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**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**[Docket No. FWS–R8–ES–2012–0099]**

**[FXES11130900000–134–FF09E32000]**

**RIN 1018–AY44**

# Endangered and Threatened Wildlife and Plants; Removing the Island Night Lizard from the Federal List of Endangered and Threatened Wildlife

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule; 12-month petition finding; notice of document availability.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), propose to remove the island night lizard (*Xantusia riversiana*) from the Federal List of Endangered and Threatened Wildlife. This action is based on a review of the best available scientific and commercial information, which indicates that the species no longer meets the definition of endangered species or threatened species under the Endangered Species Act of 1973, as amended (Act). This proposed rule, if made final, would remove the island night lizard as a threatened species from the List of Endangered and Threatened Wildlife. This document also constitutes our 12-month finding on a petition to remove the island night lizard from the Federal List of Endangered and Threatened Wildlife.

**DATES:** We will accept comments received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION]. We must receive requests for public hearings, in writing, at the address shown in the **FOR FURTHER INFORMATION CONTACT** section by [INSERT DATE 45 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION].

**ADDRESSES:** You may submit comments by one of the following methods:

(1) Electronically: Go to the Federal eRulemaking Portal: *http://www.regulations.gov*. In the Enter Keyword or ID box, enter FWS–R8–ES–2012–0099, which is the docket number for this rulemaking. On the search results page, under the Comment Period heading in the menu on the left side of your screen, check the box

next to "Open" to locate this document. Please ensure you have found the correct document before submitting your comments. If your comments will fit in the provided comment box, please use this feature of *http://www.regulations.gov*, as it is most compatible with our comment review procedures. If you attach your comments as a separate document, our preferred file format is Microsoft Word. If you attach multiple comments (such as form letters), our preferred format is a spreadsheet in Microsoft Excel.

(2) By hard copy: Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R8–ES–2012–0099; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042–PDM; Arlington, VA 22203.

We request that you send comments **only** by the methods described above. We will post all comments on *http://www.regulations.gov.* This generally means that we will post any personal information you provide us (see **Public Comments** below for more information).

Document availability: A copy of the draft post-delisting monitoring plan can be viewed at *http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=C01M*.

**FOR FURTHER INFORMATION CONTACT:** Jim Bartel, Field Supervisor, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011; telephone 760–431–9440; facsimile (fax) 760–431–5901. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

**SUPPLEMENTARY INFORMATION:**

**Executive Summary**

This document contains: (1) A 12-month finding in response to a petition to delist the San Clemente and San Nicolas Island distinct population segments (DPSs); (2) a proposed rule to remove the island night lizard from the Federal List of Endangered and Threatened Wildlife; and (3) a notice of availability of a draft post-delisting monitoring plan.

**Species addressed.** The island night lizard (*Xantusia riversiana*) is endemic to three Channel Islands (San Clemente, San Nicolas, and Santa Barbara) located off the southern California coast and a small islet (Sutil Island) located just southwest of Santa Barbara Island. Habitat restoration and reduced adverse human-related impacts since listing have resulted in significant improvements to habitat quality and quantity. As a result, threats to the island night lizard have been largely ameliorated. Though population densities

were not known at the time of listing, the island night lizard populations are currently estimated at 21.3 million lizards on San Clemente Island, 15,300 lizards on San Nicolas Island, and 17,600 lizards on Santa Barbara Island (including Sutil Island).

**Purpose of the Regulatory Action.** Under the Endangered Species Act of 1973, we may be petitioned to list, delist, or reclassify a species. In 2004, we received a petition from the Navy asserting that each of the three island occurrences of island night lizard qualifies for recognition as a DPS under the DPS Policy (61 FR 4722; February 7, 1996) and requesting that we delist the San Clemente and San Nicolas Island DPSs (Navy 2004, p. 12). In 2006, we published a 90-day finding (71 FR 48900) concluding that the Navy's petition provided substantial information supporting that delisting may be warranted and we thus announced the initiation of a status review for this species, which is summarized in this document.

**Basis for the Regulatory Action.** Under the Act, a species may be determined to be an endangered species or threatened species based on any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We must consider the same factors in delisting a species. We may delist a species if the best scientific and commercial data indicate the species is neither threatened nor endangered for one or more

of the following reasons: (1) The species is extinct; (2) the species has recovered and is no longer threatened or endangered; or (3) the original scientific data used at the time the species was classified were in error.

Threats to the island night lizard at the time of listing included destruction of habitat by feral goats and pigs, predation, and the introduction of nonnatives throughout the species range. We reviewed all available scientific and commercial information pertaining to the five threat factors in our status review of the island night lizard. The results of our status review are summarized below.

- We consider the island night lizard to be "recovered" because all substantial threats to the lizard have been ameliorated.
- All remaining potential threats to the species and its habitat, with the exception of climate change, are currently managed through implementation of management plans.
- While we recognize that results from climate change such as rising air temperatures, lower rainfall amounts, and rising sea level are important issues with potential effects to the island night lizard and its habitat, the best available information does not indicate that potential changes in temperature, precipitation patterns, and rising sea levels would significantly impact the island night lizard or its habitat. We expect that the lizard's susceptibility to climate change is somewhat reduced by its ability to use varying habitat types and by its broad generalist diet; therefore, we do not consider climate change to be a substantial threat to the species at this time.

- We find that delisting the island night lizard is warranted and we propose to remove this taxon from the Federal List of Endangered and Threatened Wildlife.
- We have also prepared a draft post-delisting monitoring plan to monitor the island night lizard after delisting to verify that the species remains secure.

**Acronyms Used**

We use several acronyms throughout the preamble to this proposed rule. To assist the reader, we set them forth here:

BMP = best management practices

CHIS = Channel Islands National Park

DPS = Distinct Population Segment

FMP = Fire Management Plan

GHG = greenhouse gas

INLMA = Island Night Lizard Management Area

INRMP = Integrated Natural Resources Management Plan

IPCC = Intergovernmental Panel on Climate Change

MSRP = Montrose Settlements Restoration Program

Navy = United States Department of the Navy

NEPA = National Environmental Policy Act

NHRP = Native Habitat Restoration Program

NPS = National Park Service

OMB = Office of Management and Budget

PDM = post-delisting monitoring

PRBO = Point Reyes Bird Observatory

Service = United States Fish and Wildlife Service

SHOBA = Shore Bombardment Area

SPR = Significant Portion of the Range

**Public Comments**

We intend any final action resulting from this proposal to be based on the best scientific and commercial data available, and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies, tribes, the scientific community, industry, or other interested parties concerning this proposed rule. We particularly seek comments concerning:

(1) Reasons why we should or should not delist the island night lizard under the Act.

(2) New biological or other relevant data concerning any threat (or lack thereof) to this species.

(3) New information concerning the population size or trends of this species.

(4) New information on the restoration of *Lycium californicum* (California boxthorn), which contain the highest recorded densities of island night lizards throughout their range.

(5) New information on the current or planned activities in the subject areas that may adversely affect or benefit the species.

(6) New information and data on the projected and reasonably likely impacts to island night lizard or its habitat associated with climate change.

(7) Information regarding how best to conduct post-delisting monitoring (PDM), should the proposed delisting lead to a final delisting rule (see *Post-Delisting Monitoring Plan Overview* section below, which briefly outlines the goals of the draft PDM Plan that is available for public comment concurrent with publication of this proposed rule). Such information might include suggestions regarding the draft objectives, and monitoring procedures for establishing population and habitat baselines, or for detecting variations from those baselines over the course of at least 9 years.

You may submit your comments and materials concerning this proposed rule (and associated draft PDM Plan) by one of the methods listed in **ADDRESSES**. We will not accept comments sent by e-mail or fax or to an address not listed in **ADDRESSES**. If you submit a comment via *http://www.regulations.gov*, we will post your entire comment—including your personal identifying information—on *http://www.regulations.gov*. If your written comments provide personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy comments on *http://www.regulations.gov*. Please

include sufficient information with your comment to allow us to verify any scientific or commercial data you submit.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov*, or by appointment during normal business hours at the Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section).

**Public Hearings**

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if requested. We must receive your request within 45 days after the date of this **Federal Register** publication. Send your request to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing.

**Peer Review**

In accordance with our joint policy on peer review published in the **Federal**

**Register** on July 1, 1994 (50 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule and the draft PDM Plan. The purpose of peer review is to ensure that decisions are based on scientifically sound data, assumptions, and analyses. A peer review panel will conduct an assessment of the proposed rule and draft PDM Plan, and the specific assumptions and conclusions regarding the proposed delisting. This assessment will be completed during the public comment period.

We will consider all comments and information we receive during the comment period on this proposed rule as we prepare the final determination. Accordingly, the final decision may differ from this proposal.

**Background**

Section 4(b)(3)(B) of the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 *et seq.*), requires that, for any petition to revise the Federal Lists of Endangered and Threatened Wildlife and Plants that contains substantial scientific or commercial information that listing or reclassifying the species may be warranted, we make a finding within 12 months of the date of receipt of the petition. In this finding, we will determine whether the petitioned action is: (a) Not warranted, (b) warranted, or (c) warranted, but the immediate proposal of a regulation implementing the petitioned action is precluded by other pending proposals to determine whether species are

endangered or threatened, and expeditious progress is being made to add or remove qualified species from the Federal Lists of Endangered and Threatened Wildlife and Plants. We must publish these 12-month findings in the **Federal Register**.

**Previous Federal Actions**

The island night lizard was proposed as a threatened species under the Act on June 1, 1976 (41 FR 22073) based on threats from habitat degradation from grazing by introduced animals on all three islands and from "habitat alterations caused by farming, fire, grazing by introduced animals, and invasion by exotic plants" on San Nicolas and Santa Barbara Islands. A final rule listing the island night lizard as a threatened species was published in the **Federal Register** on August 11, 1977 (42 FR 40682). We finalized a Recovery Plan for the Endangered and Threatened Species of the California Channel Islands (Recovery Plan) in January 1984, which addressed the island night lizard and six other federally listed species occurring on San Clemente, San Nicolas, and Santa Barbara Islands (including Sutil Island) off the coast of southern California (Service 1984). Subsequently, we initiated notice of reviews and requested public comments concerning the status of the island night lizard under 4(c)(2) of the Act on September 27, 1982 (47 FR 42387), July 7, 1987 (52 FR 25523), and November 6, 1991 (56 FR 56882). None of those reviews resulted in a recommendation to change the status of the species; no summaries were published.

In 1997, the National Wilderness Institute submitted a petition to delist the island night lizard on the basis of data error (National Wilderness Institute 1997). In a letter to the National Wilderness Institute dated June 29, 1998 (Service 1998), we indicated that due to the low priority assigned to delisting activities in our 1997 Fiscal Year Listing Priority Guidance, we were not able to act on the petition at that time.

In 2004, the Navy submitted a petition asserting that the island night lizard populations on San Clemente, San Nicolas, and Santa Barbara Islands each qualify as DPSs (Navy 2004). The petition stated that the island night lizard populations meet the discreteness and significance criteria of the Service's and National Marine Fisheries Service's Joint Policy Regarding the Recognition of Distinct Vertebrate Population Segments under the Act (DPS Policy) (61 FR 4722, February 7, 1996). The petition sought the delisting of the San Clemente and San Nicolas Island distinct population segments of island night lizard.

On July 7, 2005 (70 FR 39327), we announced the initiation of a 5-year review of the island night lizard and requested that interested parties submit information regarding the species' status. We published a second notice in the **Federal Register** on November 3, 2005 (70 FR 66842), extending the request for information concerning the island night lizard. No information regarding the status of the island night lizard was received in response to either information request. On August 22, 2006 (71 FR 48900), we published in the **Federal Register** a 90-day finding for both the 1997 and 2004 petitions to delist

the island night lizard. In our 90-day finding, we determined the 1997 petition from the National Wilderness Institute did not provide substantial information indicating that delisting the island night lizard due to data error was warranted, which concluded our review of that petition. However, we determined the 2004 petition from the Navy provided substantial information indicating the petitioned actions of delisting the San Clemente and San Nicolas Island populations may be warranted and initiated a 12-month status review, which is represented by this proposed delisting rule.

In September 2006, we completed a 5-year review of the island night lizard (Service 2006, pp. 24–26). In that review, we conducted a preliminary DPS analysis of the island night lizard populations on San Clemente, San Nicolas, and Santa Barbara Islands and concluded that the lizards on each island may qualify as DPSs under the Service's policy because they may each meet the discreteness and significance criteria. Additionally, the 2006 5-year review recommended revising the listing of the island night lizard by designating each island as a DPS. That review also recommended classifying the San Nicolas and Santa Barbara Island DPSs as threatened. Lastly, the 5-year review concluded that the San Clemente Island DPS had recovered due to the amelioration of threats and recommended delisting of this DPS (Service 2006, p. 26). However, we stated that we would continue to seek additional information and refine our preliminary DPS analysis in the context of the 12-month finding on the Navy's petition to delist the San Clemente and San Nicolas populations of the island night lizard (Service 2006, p. 5). We published a notice in the **Federal Register** on February 14, 2007 (72 FR 7064),

announcing the availability of completed 5-year reviews, including the island night lizard 5-year review. A copy of the 2006 5-year review for the island night lizard is available on the Service's Environmental Conservation Online System [*http://ecos.fws.gov/docs/five_year_review/doc776.pdf*].

Most recently, we published a notice of initiation of 5-year reviews in the **Federal Register** on May 21, 2010 (75 FR 28636), initiating a further status review for the island night lizard. We completed this review for the lizard on October 5, 2012. The 2012 review recommended delisting the lizard throughout its entire range due to the amelioration of substantial threats and current management of potential threats to the species and its habitat (Service 2012a, p. 44). As we are adopting this recommendation in this finding, we do not further address here the DPS status of the three island populations.

**Species Information**

The island night lizard occurs on three of the Channel Islands off the coast of California: San Clemente Island, San Nicolas Island, and Santa Barbara Island. It also occurs on a small islet, Sutil Island, just southwest of Santa Barbara Island. The majority of information on island night lizard biology and life history comes from studies conducted on San Clemente Island, with some additional studies and information from

San Nicolas and Santa Barbara islands. The information on island night lizards on Sutil Island is limited to the two occasions it was documented there.

*Description*

Island night lizard adults average 2.6 to 4.3 inches (in) (65 to 109 millimeters (mm)) in length from snout to vent (Goldberg and Bezy 1974, p. 356; Fellers and Drost 1991, p. 28; Mautz 1993, p. 422). Dorsal coloration ranges from pale ash gray and beige to shades of brown and shades of black with varying uniform, mottled, and striped patterns (Bezy *et al*. 1980, p. 575; Fellers and Drost 1991, pp. 42–44). Both coloration and patterning are highly variable among lizards on all islands throughout their range (Bezy *et al*. 1980, p. 575; Fellers and Drost 1991, pp. 43–44).

*Biology and Life History*

The island night lizard is a slow-growing, late-maturing, and long-lived lizard (Goldberg and Bezy 1974, pp. 355–358; Fellers and Drost 1991, pp. 36–42). Island night lizards can live on average 11 to 13 years, with some individuals estimated to be 30 years of age (Fellers and Drost 1991, p. 38; Mautz 1993, p. 420; Fellers *et al*. 1998, p. 25).

Members of the genus *Xantusia* are primarily active during the day (Bezy 1988, p. 8); however, they are highly sedentary and tend to remain under shelter such as dense

vegetation or rocks (Fellers and Drost 1991, pp. 50, 55; Mautz 1993, p. 419). Sheltered areas provide suitable cover to protect the species from predation and allow sufficient amounts of sunlight to penetrate to the ground, providing a range of temperatures for thermal regulation (regulation of body temperature) (Mautz 2001a, pp. 9–12).

Island night lizards are viviparous (bear live young) and reach sexual maturity at approximately 3 to 4 years of age (Goldberg and Bezy 1974, p. 355; Fellers and Drost 1991, p. 40). Breeding begins around March or April and single broods of young are born around September (Goldberg and Bezy 1974, p. 353). Females demonstrate irregular intervals between reproductive cycles, but appear to approach a biennial cycle (approximately half of sexually mature females reproduce in any given year) (Goldberg and Bezy 1974, p. 358). The island night lizard is unique within the genus *Xantusia* for having a brood size greater than two (Fellers and Drost 1991, p. 59); however, brood size differs among each of the islands where the species occurs, with females on San Nicolas Island averaging 5.3 young per brood and females on both San Clemente and Santa Barbara Islands averaging 3.9 young per brood (Fellers and Drost 1991, p. 60).

Based on multiple years of surveys on San Clemente Island, neonate (young of the year) island night lizards on average comprise about 25 percent of the population (Mautz 1993, p. 422), but this percentage may be lower during periods of drought. Between August 2003 and July 2004, only 1.65 in (42 mm) of rain fell on San Clemente Island (Mautz 2005, p. 5). Surveys conducted in 2004 during the first part of the birthing season

(early September) revealed neonate lizards comprised only 14 of the 199 lizards captured (approximately 7 percent) (Mautz 2005, p. 5). In contrast, surveys conducted in October 2006 following a very rainy winter on San Clemente Island (9.65 in (245 mm) of rainfall) revealed 45 of the 127 lizards (35 percent of those captured) were yearlings (in the first year of life) (Mautz 2007, p. 4). Had the 2006 survey taken place in early September, the yearlings would have been counted as neonates. The significant difference in the percentage of neonates or yearlings between dry and wet years may be representative of the species' reproductive response to annual variations in rainfall and food abundance.

Island night lizards are omnivorous, with a diet primarily consisting of insects and plant matter (Knowlton 1949, p. 45; Brattstrom 1952, pp. 168–171; Mautz 1993, p. 417). Analyses of stomach and digestive tract contents of 24 lizards collected from San Clemente Island in 1948 revealed an omnivorous diet consisting of insects (including species of Hemiptera, Coleoptera, Lepidoptera, Diptera, and Hymenoptera); grass, sedge, seeds, and fruits; lizard skin; and the remains of what appeared to be juvenile mice (Knowlton 1949, p. 45). In 15 of the 24 specimens, plant material constituted at least 50 percent of the total food identified in the stomach contents (Knowlton 1949, p. 46). A more detailed analysis of numerous species of *Xantusia*, including specimens of the island night lizard from San Clemente, San Nicolas, and Santa Barbara Islands, was conducted by Brattstrom (1952, p. 3). Based on samples of the stomach and intestinal contents, Brattstrom (1952, p. 172) determined that the island night lizard eats the widest variety of foods of any of the species of the Genus *Xantusia* included in the research.

Although all age groups will eat both plant and animal material, younger lizards consume a greater amount of animal prey in their diet than older lizards (Fellers and Drost 1991, p. 56). Plant material found in the stomach or fecal samples of island night lizards included *Mesembryanthemum crystallinum* (crystalline iceplant); the fruits, flowers, and leaves of *Lycium californicum* (California boxthorn); and the fruits of *Atriplex semibaccata* (Australian saltbush) (Fellers and Drost 1991, pp. 55–56).

*Distribution and Habitat*

The island night lizard is endemic to three Channel Islands (San Clemente, San Nicolas, and Santa Barbara) located off the southern California coast (Goldberg and Bezy 1974, pp. 355–358; Fellers and Drost 1991, p. 28) and a small islet (Sutil Island) located just southwest of Santa Barbara Island (Bezy *et al*. 1980, p. 579). San Clemente Island and San Nicolas Island are managed by the Navy, while Santa Barbara Island and Sutil Island are owned and managed by the National Park Service. San Clemente, San Nicolas, and Santa Barbara Islands vary in size and the amount of suitable habitat available for the island night lizard (see Table 1 below at the end of the "*Population Density and Abundance*" section, which highlights the lizard's estimated population size for each island in relation to each island's size and the available habitat present). San Clemente Island is the largest and southernmost of the Channel Islands occupied by the lizard, consisting of approximately 37,200 acres (ac) (15,054 hectares (ha)), and is located approximately 68 miles (mi) (109 kilometers (km)) west of San Diego,

California, and 55 mi (89 km) south of Long Beach, California (Navy 2002, p. 1.1). San Nicolas Island is the second largest and westernmost of the three Channel Islands inhabited by the lizard, consisting of approximately 14,230 ac (5,698 ha), and is located approximately 28 mi (45 km) southwest of Santa Barbara Island and 50 mi (80 km) northwest of San Clemente Island (Fellers *et al.* 1998, p. 5). Santa Barbara Island is the smallest and northernmost island inhabited by the lizard, consisting of approximately 640 ac (259 ha), and is located approximately 38 mi (61 km) from the mainland of southern California (Fellers and Drost 1991, pp. 5, 29) and 28 mi (45 km) northeast of San Nicolas Island.

Sutil Island is an islet located approximately 0.4 mi (0.65 km) southwest of Santa Barbara Island and consisting of approximately 13.7 ac (5.5 ha). At the time of listing (42 FR 40682), island night lizards were not known to occur on Sutil Island. Since listing, we are aware of only two occasions where island night lizards were documented on Sutil Island and, currently, little information concerning the species on Sutil Island exists.

Different surveys and descriptions of the vegetation types on San Clemente, San Nicolas, and Santa Barbara Islands have referred to the habitat supporting island night lizards under various names and descriptions. Two vegetation types identified by Sawyer *et al.* (2009) support most of the known dominant plant taxa associated with the lizard. The two vegetation types are Coast prickly pear scrub and *Lycium californicum*

Provisional Shrubland Alliance. In Coast prickly pear scrub, cacti such as *Opuntia littoralis* (coastal prickly pear), *Opuntia oricola* (chaparral prickly pear), and *Cylindropuntia prolifera* (coast cholla) are dominant or codominant among the shrub canopy (Sawyer *et al.* 2009, pp. 599–601). *Lycium californicum* Provisional Shrubland Alliance is characterized by the prevalence of *L. californicum* (Sawyer *et al.* 2009, p. 588).

*Cylindropuntia prolifera* is referred to by its older Latin name, *Opuntia prolifera,* in numerous references cited in this document (for example, Fellers and Drost 1991, pp. 34, 68; Mautz 2001a, p. 17; Navy 2002, p. 3.54). While the Service recognizes that *C. prolifera* is the currently accepted name of this species and is used in discussions that reference current literature in this document (for example, Sawyer *et al.* 2009 and NPS *in litt.* 2011b), we will use the older name of *O. prolifera* only when referencing previous literature. Vegetation now classified as Coast prickly pear scrub includes communities variously referred to as Maritime Succulent Scrub and Maritime Desert Scrub in several references cited within this document (Fellers and Drost 1991, pp. 34, 68; Mautz 2001a, p. 17; Navy 2002, p. 3.54). *Lycium californicum* Provisional Shrubland Alliance (Sawyer *et al.* 2009, p. 588) is a vegetative community in which *L. californicum* is a dominant or codominant species and taxa such as *Coreopsis gigantea* (giant coreopsis), *Bergerocactus emoryi* (golden-spined cereus), and *C. prolifera* are present. This is also referred to as Maritime Succulent Scrub, Maritime Desert Scrub, or boxthorn habitat by numerous references included within this document (for example, Fellers and Drost 1991, pp. 34,

68; Mautz 2001a, p. 17; Navy 2002, p. 3.54). To eliminate any confusion, we will refer to the vegetation types that comprise high-quality habitat and supports high island night lizard densities as *L. californicum* and *Opuntia* spp. habitats.

Surveys conducted on the islands occupied by the island night lizard indicate strong habitat preferences for *Lycium californicum* and *Opuntia* spp. habitats (Fellers and Drost 1991, p. 34; Schwemm 1996, pp. 3–4; Mautz 2001a, p. 23; Mautz 2004, p. 18). These habitats are considered high quality because they offer suitable cover to protect the species from predation and allow sufficient amounts of sunlight to penetrate to the ground, which provides a thermal mosaic for thermal regulation (Mautz 2001a, pp. 9–11, 17–18). Island night lizards are also known to occupy grasslands, *Coreopsis gigantea* stands, mixed shrub communities, rocky outcrops, and cobble and driftwood habitats (Fellers and Drost 1991, p. 34; Schwemm 1996, pp. 3–4; Mautz 2001a, p. 23; Mautz 2004, p. 18). Loose rocks or crevices in clay soils are also important habitat components within island night lizard habitat (Fellers and Drost 1991, p. 53; Mautz 2001a, p. 17).

Mautz (2001a, pp. 17–18) suggested that vegetation community characteristics may be as important to island night lizard habitat as species composition. This assertion is corroborated by Fellers *et al*. (1998, p. 16), who concluded that plywood debris, which serves as cover in grasslands with scattered *Haplopappus* (haplopappus) and few to no other shrub species, was a factor that contributed to high densities of lizards at sampling sites on San Nicolas Island.

In addition to natural cover, artificial cover created by human presence on San Clemente, San Nicolas, and Santa Barbara Islands may also be utilized by island night lizards, thereby enabling them to persist in areas of otherwise unsuitable habitat. During surveys for the species on San Clemente and San Nicolas Islands, lizards were routinely found under pieces of plywood discarded by U.S. Navy (Navy) personnel (Fellers *et al*. 1998, p. 18). The presence of these boards, some of which may have been in place for a decade or more, provided an opportunity for researchers to assess longevity of the species because some specific lizards were recorded (captured and recaptured) over long intervals of time (Fellers *et al.* 1998, p. 7). Underlying soils may also indicate whether an area supports lizards. Extensive trapping conducted on San Nicolas Island determined that loose sand substrates are unsuitable for the species (Fellers *et al.* 1998, pp. 11–17). Very little information exists concerning the vegetative communities on Sutil Island.

San Clemente Island

San Clemente Island supports approximately 19,640 acres (ac) (7,948 hectares (ha)) of high-quality island night lizard habitat distributed primarily along the western marine terraces (Navy 2002, p. 3.54). There are approximately 13,791 ac (5,581 ha) of *Opuntia* spp. habitat and 5,849 ac (2,367 ha) of *Lycium californicum* habitat (Service 1997, p. 6; Navy 2002, p. 3.54). From 1992 to 2008, a long-term trend analysis was conducted, which indicated no clear trend in habitats dominated by *Opuntia* spp. or *L.*

*californicum* on San Clemente Island, but there was an approximate 6 percent reduction of *L. californicum* and 10 percent reduction of *Opuntia* spp. in the cover of those habitats on the island (Tierra Data Inc. 2010, pp. 48–67). This observed decrease was likely due to high rainfall experienced in the baseline years from 1991 to 1993, in comparison to subsequent rainfall (Tierra Data Inc. 2010, p. 125).

Low- to moderate-quality island night lizard habitat consisting of *Artemisia* spp. (sagebrush), *Eriogonum* spp. (buckwheat), *Deinandra clementina* (as *Hemizonia clementina*) (Catalina tarweed), as well as *Lycium californicum* and *Opuntia* spp., occupies approximately 386 ac (156 ha) of the northeastern escarpment of San Clemente Island (Navy 2002, p. 3.65). Low-quality grassland habitat occupies approximately 11,831 ac (4,788 ha) on the central plateau and eastern scarp of the island (Navy 2002, p. 3.54). Lizards on San Clemente Island have not been found in closed-canopy canyon or woodland habitats, which do not allow sufficient amounts of sunlight to penetrate the canopy cover for thermal regulation, or active sand dunes that do not offer sufficient cover for the species (Mautz 2001a, pp. 4, 9, 18).

San Nicolas Island

Due to differing survey methodologies and precision of mapping efforts, the amount of high-quality habitat on San Nicolas Island has varied over time. Based on these various surveys and methodologies, little high-quality habitat is known to exist on

San Nicolas Island. Site specific vegetation transects completed in 1996 failed to locate *Lycium californicum* and only once located *Opuntia* spp. (Chess *et al.* 1996, pp. 19–46). Fellers *et al*. (1998, p. 46) conducted an island-wide analysis of the vegetation, utilizing aerial photos and on the ground surveys, and estimated 1.9 ac (0.8 ha) of high-quality island night lizard habitat and about 161 ac (65 ha) of lower-quality mixed shrub habitat occur on San Nicolas Island. In 2003, Junak (2003, p. 7) also conducted an island-wide survey of the vegetation utilizing helicopter flyovers, on the ground surveys, and Global Positioning System receivers and estimated that approximately 11.2 ac (4.6 ha) of high-quality habitats were available on the island. That high-quality habitat occurs primarily on the eastern half of the island and is patchily distributed with lower-quality habitat (Fellers *et al.* 1998, pp. 13–14). The lower-quality habitat is a mixed shrub community comprising *Haplopappus* spp., *Calystegia macrostegia* (island morning-glory), *Coreopsis gigantea*, *Atriplex semibaccata*, *Deinandra clementina*, *Lupinus albifrons* (silver lupine), *Baccharis pilularis* (coyote brush), and *Artemisia* spp. (Fellers *et al.* 1998, pp. 16–17). Island night lizards generally do not inhabit the western half of San Nicolas Island due to a lack of suitable vegetative or rock cover. One exception is a 0.6-ac (0.2-ha) area of cobble and driftwood habitat at Redeye Beach that is just above the intertidal zone on the northwestern side of the island (Fellers *et al.* 1998, p. 11). Occupancy within this habitat, which supports the highest density of lizards on the island, is unique to San Nicolas Island (Fellers *et al*. 1998, p. 11).

Santa Barbara Island

Habitat on Santa Barbara Island is limited due to the small size of the island and the extensive habitat damage that occurred historically when goats (*Capra* spp.), sheep (*Ovis* spp.), and European rabbits (*Oryctolagus cuniculus*) were present (Service 1984, pp. 45–46; Fellers and Drost 1991, p. 70). Using aerial photographs of the island from 1983 and ground surveys, Fellers and Drost (1991, p. 68) identified approximately 14.8 ac (6 ha) of high-quality habitat on Santa Barbara Island that included *Lycium californicum*, *Opuntia* spp., and rock outcrops. Low- to moderate-quality habitat on Santa Barbara Island also contains some *Lycium californicum* and *Opuntia* spp., but is dominated by *Coreopsis gigantea*, *Eriogonum giganteum* var. *compactum* (Santa Barbara Island buckwheat), and *Eriophyllum nevinii* (silver-lace) (Fellers and Drost 1991, p. 70); these native shrub communities are patchily distributed in grasslands across a majority of the island (Halvorson *et al.* 1988, p. 111).

The National Park Service (NPS) is preparing a new preliminary vegetative analysis of Santa Barbara Island, but it has not been finalized (NPS 2011b, *in litt.*). Preliminary results from surveys conducted in 2010 (in a report not yet finalized) by the NPS indicate an increase in high-quality habitat, where *Lycium californicum and Opuntia* spp. are dominant or codominant among the vegetation (NPS 2011b, *in litt*.). Results indicate that there are approximately 16.6 ac (6.7 ha) of *L. californicum* and 9.3 ac (3.8 ha) of *Opuntia oricola* habitat where these taxa account for greater than 39 percent of the

vegetative cover (Rodriguez 2012, pers. obs.). A preliminary analysis concerning *Cylindropuntia prolifera*, another documented habitat for the lizard, is not yet available.

Sutil Island

Little is known about the habitat on Sutil Island. Sutil Island consists of approximately 13.7 ac (5.5 ha) (Rudolph 2011, pers. obs.), much of it unbroken bedrock, with some vegetation identified as island night lizard habitat, such as low shrubs, *Lycium californicum*, and rocks and fissures, but these are sparsely distributed (Drost 2011, pers. obs.).

*Population Density and Abundance*

At listing (42 FR 40682), island night lizard population densities were not known on any of the inhabited Channel Islands. Island night lizards appear to show preference for several habitat types (Fellers and Drost 1991, p. 68; Mautz 2001a, pp. 17–19); however, determining an overall population estimate is difficult due to the sedentary and reclusive behavior of the species. The highest lizard population densities are observed in *Lycium californicum* and *Opuntia* spp. habitats (Fellers and Drost 1991, pp. 34, 68; Mautz 2001a, p. 17). Lizards are found in lower densities throughout shrub communities, rocky outcrops, grasslands, and in stands of *Coreopsis gigantea* (Service 1984, p. 93; Fellers and Drost 1991, p. 35; Mautz 2001a, pp. 17–22). Mautz (2004, p. 8) reported that

a large number of lizards are repeatedly recaptured in survey traps. High recapture rates, in conjunction with large survey grids relative to their home range size, indicate that standardized trapping provides a good estimate of local densities (White 1982, p. 130). Therefore, trapping in suitable cover on San Clemente, San Nicolas, and Santa Barbara Islands can be a good indicator of lizard density and overall abundance (Mautz 2001a, p. 17).

San Clemente Island

Surveys conducted over a 7-year period indicate that San Clemente Island contains the largest population of island night lizards. From 1991 to 1998, researchers calculated population densities using data from pitfall traps, cover boards, and rock turn surveys in high-quality island night lizard habitat (Mautz 2001a, pp. 17–23, 43–54). The Navy conducted similar surveys in 2009 and 2010; as of 2011 (Mautz 2011, pers. comm.), those results were not yet analyzed and are not currently available.

Density estimates were assessed by analyzing capture rates and mark-recapture data, based on the 1991 to 1998 surveys, using three methodologies: (1) A minimum estimate measure of the number of animals intercepted in a single sample; (2) a Lincoln Index; and (3) a Regression Index (Mautz 2001a, pp. 21–23). The minimum estimate measure resulted in a population of 8.18 million on San Clemente Island; however, Mautz (2001a, pp. 20–22) indicated that this number represents an underestimate because

most of the lizard population is inaccessible in dense vegetation or underground, and pitfall traps intercept only animals active in the immediate vicinity of the trap. The Lincoln Index estimated that 16.71 million lizards occurred on San Clemente Island; however, Mautz (2001, pp. 43–44) again cautioned that this method could underestimate the number of lizards because inadequate mixing of those captured lizards back into the population could result in a higher proportion of recaptures. The Regression Index estimated that 25.89 million lizards occurred on San Clemente Island; however, Mautz (2001, p. 51) cautioned that this method could overestimate the number of lizards because the index requires a closed sampling population and the extended period of time of sampling from 1991–1998 may accommodate an increased amount of immigration and emigration on the study plots.

Mautz (2001a, pp. 21–23) suggested that a reasonable estimate of island night lizard density on San Clemente Island could be calculated from the average between the Lincoln and Regression Indexes. This calculation resulted in an estimate of 21.3 million lizards on the island. Evaluation of the habitat type where the data was collected was used to estimate lizard densities in high-quality habitat: 1,934 lizards per 2.47 ac (1 ha) in *Lycium californicum* habitat, 2,558 lizards per 2.47 ac (1 ha) in *Opuntia littoralis* and *O. oricola* habitat, and 1,423 lizards per 2.47 ac (1 ha) in *O. prolifera* habitat (Mautz 2001a, p. 23). These high-quality habitats occur on the lower marine terraces of the west side of the island and support approximately half of the estimated population (10.4 million) of lizards (Mautz 2001a, p. 29). In the lower-quality habitat areas, island night

lizards were estimated at 1,142 lizards per 2.47 ac (1 ha) in upland plateau grasslands and 926 lizards per 2.47 ac (1 ha) in scarp grassland and coastal sage (Mautz 2001a, p. 23). No lizards were found in canyon woodland and active sand dunes on the island (Mautz 2001a, p. 23). Because there has not been a new population estimate or much change in the quantity of habitat, the Service and Navy continue to use the estimate of 21.3 million lizards.

San Nicolas Island

Estimates of the number of island night lizards on San Nicolas Island have been assessed from a number of data collection efforts. The primary study conducted surveys from 1992 to 1995 using pitfall traps, coverboards, and Sherman small mammal traps arranged in transects through suitable habitat and on the edges of impenetrable habitats (Fellers *et al.* 1998, p. 7). That study also utilized data from surveys conducted by Tom Murphey from 1984 to 1985 (Fellers *et al.* 1998, p. 5). Lastly, Fellers *et al.* (1998, p. 71) also used grid arrays conducted from 1992 to 1995, from some of the areas initially surveyed by Tom Murphey.

Fellers *et al.* (1998, p. 46) estimated the number of lizards on San Nicolas island and density of lizards in different habitat types by comparing survey data from populations on Santa Barbara Island with aerial photograph estimates of the habitat on San Nicolas Island. Overall, lizard abundance on San Nicolas Island was estimated at

15,300 individuals (Fellers *et al.* 1998, p. 20). Island night lizard densities were estimated at 3,200 lizards per 2.47 ac (1 ha) in *Lycium californicum* habitat, 2,500 lizards per 2.47 ac (1 ha) in *Opuntia* spp. habitat, and 200 lizards per 2.47 ac (1 ha) in mixed-shrub habitat (Fellers *et al.* 1998, p. 46). Island night lizards are found primarily on the eastern half of San Nicolas Island; however, the island does support an exceptionally high density of lizards (4,000 per 2.47 ac (1 ha)) in cobble and driftwood habitat found on Redeye Beach at the northwestern end of the island (Fellers *et al*. 1998, pp. 11, 20). The mixed-shrub habitat is only utilized by the island night lizard on San Nicholas Island and it is unknown whether it supports a self-sustaining lizard population. Through examination of aerial photographs and ground surveying efforts, Fellers *et al.* (1998, p. 46) estimated approximately 0.13 ac (0.05 ha) of *L. californicum* and 1.17 ac (0.47 ha) of *Opuntia* spp. existed on San Nicolas Island.

Subsequent to Fellers *et al.* (1998), Junak (2003, p. 7) revised the estimated amount of *Opuntia* spp. and *Lycium californicum* habitats on San Nicolas Island, and concluded there were 11.2 ac (4.6 ha) of these habitats available on the island, compared to 1.3 ac (0.52 ha) previously. A new population assessment of island night lizards on San Nicolas Island has not been conducted, though we anticipate that the number of lizards has increased due to the increase in high-quality habitat. Currently, the Navy's 2010 Integrated Natural Resources Management Plan (INRMP) for San Nicolas Island continues to use the population size of approximately 15,000 lizards established by Fellers *et al.* (1998, p. 20) as the current population estimate (Navy 2010, p. 3-43).

Santa Barbara Island

Surveys to assess island night lizard population status were conducted on Santa Barbara Island from 1981 to 1988 using pitfall traps and Sherman small mammal traps in transects and grid arrays depending on the island's topography (Fellers and Drost 1991, p. 30). Island night lizard densities were estimated at 3,213 lizards per 2.47 ac (1 ha) in *Lycium californicum* habitat, 2,476 lizards per 2.47 ac (1 ha) in *Opuntia* spp. habitat, and 1,665 lizards per 2.47 ac (1 ha) in rock habitat (Fellers and Drost 1991, p. 68). All other habitat types or vegetative communities on the island displayed a density of zero (Fellers and Drost 1991, p. 68). Based on estimates of available habitat types and extrapolation of lizard densities within those habitat types, a total of approximately 17,600 lizards were estimated to occur on Santa Barbara Island in 1991 (Fellers and Drost 1991, p. 68). A new preliminary vegetative analysis of Santa Barbara Island is being drafted and until it is finalized, we will use Fellers and Drost (1991, p. 68) density estimates as the most recent estimate. The Service and NPS continue to use this estimate, because there has been little change in the quantity of habitat available and no additional population estimates have been conducted.

Sutil Island

Sutil Island was not known to be occupied at the time the island night lizard was listed. In 1978, a survey of Sutil Island was conducted and 12 lizards were identified (Wilson 1979, as cited in Power 1979, p. 8.5). In 1991, Drost (2011, pers. obs.) visited the island and though there was little habitat that could be turned or searched, he observed one lizard in a rock crevice. He noted that though vegetative cover on the island was sparse, there were surface cracks, fissures, and boulder cover that could provide cover. We have no surveys for the island night lizard on Sutil Island since 1978. Because Sutil Island is within close proximity to Santa Barbara Island, has very few to no visitors annually, and like Santa Barbara Island is managed by the NPS, we will incorporate Sutil Island in the discussion of Santa Barbara Island for the remainder of this document.

Table 1. Island size, amount of habitat, and population size of the island night lizard.

| Island | Size | Amount of High-Quality Habitat* | Estimated Population |
|---|---|---|---|
| San Clemente | 37,200 ac (15,054 ha) | 19,640 ac (7,948 ha) | 21.3 million |
| San Nicolas** | 14,230 ac (5,698 ha) | 11.8 ac (4.8 ha) | 15,300 |
| Santa Barbara | 640 ac (259 ha) | 25.9 ac (10.5 ha) | 17,599 |

* High-quality habitat (*Lycium californicum* and *Opuntia* spp.)
** Amount of habitat includes cobble and driftwood habitat unique to San Nicolas Island.

**Recovery Planning and Implementation**

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that

such a plan will not promote the conservation of the species. The Act directs that, to the maximum extent practicable, we incorporate into each plan:

(1) Site-specific management actions that may be necessary to achieve the plan's goals for conservation and survival of the species;

(2) Objective, measurable criteria, which when met would result in a determination, in accordance with the provisions of section 4 of the Act, that the species be removed from the list; and

(3) Estimates of the time and cost required to carry out the plan.

Revisions to the list (adding, removing, or reclassifying a species) must reflect determinations made in accordance with sections 4(a)(1) and 4(b) of the Act. Section 4(a)(1) requires that the Secretary determine whether a species is endangered or threatened (or not) because of one or more of five threat factors. Objective, measurable criteria, or recovery criteria contained in recovery plans, must indicate when we would anticipate an analysis of the five threat factors under section 4(a)(1) would result in a determination that a species is no longer endangered or threatened. Section 4(b) of the Act requires the determination be made "solely on the basis of the best scientific and commercial data available."

While recovery plans are intended to provide guidance to the Service, States, and other partners on methods of minimizing threats to listed species and on criteria that may be used to determine when recovery is achieved, they are not regulatory documents and

cannot substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. Determinations to remove a species from the List made under section 4(a)(1) of the Act must be based on the best scientific and commercial data available at the time of the determination, regardless of whether that information differs from the recovery plan.

In the course of implementing conservation actions for a species, new information is often gained that requires recovery efforts to be modified accordingly. There are many paths to accomplishing recovery of a species, and recovery may be achieved without all criteria being fully met. For example, one or more recovery criteria may have been exceeded while other criteria may not have been accomplished, yet the Service may judge that, overall, the threats have been minimized sufficiently, and the species is robust enough, that the Service may reclassify the species from endangered to threatened or perhaps delist the species. In other cases, recovery opportunities may have been recognized that were not known at the time the recovery plan was finalized. These opportunities may be used instead of methods identified in the recovery plan.

Likewise, information on the species may be learned that was not known at the time the recovery plan was finalized. The new information may change the extent that recovery criteria need to be met for recognizing recovery of the species. Overall, recovery of species is a dynamic process requiring adaptive management, planning, implementing, and evaluating the degree of recovery of a species that may, or may not,

fully follow the guidance provided in a recovery plan.

Thus, while a recovery plan provides important guidance on the direction and strategy for recovery, and indicates when a rulemaking process may be initiated, the determination to remove a species from the Federal List of Endangered and Threatened Wildlife is ultimately based on an analysis of whether a species is no longer endangered or threatened. The following discussion provides a brief review of recovery planning for the island night lizard, as well as an analysis of the recovery criteria and goals as they relate to evaluating the status of the species.

In 1984, the Service published the Recovery Plan for the Endangered and Threatened Species of the California Channel Islands (Recovery Plan) that addressed three candidate species and seven federally threatened or endangered plants and animals, including the island night lizard, distributed among three of the Channel Islands (Service 1984). Given the threats in common to the 10 species addressed, the Recovery Plan is broad in scope and focuses on restoration of habitats and ecosystem function. The Recovery Plan included six general objectives covering all 10 of the plant and animal species:

(1) Identify present adverse impacts to biological resources and strive to eliminate them.

(2) Protect known resources from further degradation by: (a) Removing feral

herbivores, carnivores, and selected exotic plant species; (b) controlling unnatural erosion in sensitive locations; and (c) directing military operations and adverse recreational uses away from biologically sensitive areas.

(3) Restore habitats by revegetating disturbed areas using native species.

(4) Identify areas of San Clemente Island where habitat restoration and population increase of certain addressed taxa may be achieved through a careful survey of the island and research on habitat requirements of each taxon.

(5) Delist or upgrade the listing status of those taxa that achieve vigorous, self-sustaining population levels as the result of habitat stabilization, restoration, and preventing or minimizing adverse human-related impacts.

(6) Monitor effectiveness of recovery effort by undertaking baseline quantitative studies and subsequent follow-up work (Service 1984, pp. 106–107).

Our review of the Recovery Plan focuses on the actions identified that promote the recovery of the island night lizard. The Recovery Plan adopts a generalized strategy to eliminate or control selected threats associated with nonnative species, erosion, and habitat disturbance. Elimination of these threats and restoration of degraded habitat on the Channel Islands are necessary for recovery of the island night lizard. The Recovery Plan states that "[o]nce the threats to these taxa have been removed or minimized and the habitats are restored, adequately protected, and properly managed, reclassification for some taxa may be considered" (Service 1984, p. 108). Actions specified in the Recovery Plan that are pertinent to recovery of the threatened island night lizard include:

(1) Eliminate selected nonnative species from San Clemente, San Nicolas, and Santa Barbara Islands.

(2) Conduct a soil survey of San Clemente Island.

(3) Construct check-dams to control erosion on San Clemente Island.

(4) Revegetate eroded and disturbed areas on San Clemente Island.

(5) Conduct specific programs for the island night lizard once management recommendations are formulated to enhance populations.

(6) Provide good-quality habitat for endangered or threatened birds (includes expanding *Lycium californicum*, which is high-quality island night lizard habitat).

(7) Modify existing management plans to minimize habitat disturbance.

(8) Implement policies to minimize habitat disturbance or loss.

(9) Prevent the introduction of additional nonnative taxa.

(10) Maintain restriction of recreational use of Santa Barbara Island to existing designated trails.

(11) Establish an ecological reserve for regions of high density of island night lizards on San Clemente and San Nicolas Islands.

(12) Determine island night lizard essential habitat, habitat requirements and preferences, population size, distribution, and effects of nonnative plants on the species and utilize data for development of habitat recommendations and habitat restoration.

(13) Evaluate the success of management actions.

(14) Increase public support for recovery efforts.

(15) Use existing laws and regulations to protect the island night lizard.

Specific criteria for determining when threats have been removed or sufficiently minimized for the island night lizard are not identified in the Recovery Plan. However, six objectives are described in general to achieve recovery of the Channel Island species. Following are a summary of actions and activities that have been implemented according to the 1984 Recovery Plan (Service 1984, pp. 106–107), and that contribute to achieve these recovery objectives.

*Objective 1: Identify present adverse impacts to biological resources and strive to eliminate them.*

Actions taken by the Navy and NPS to contribute to achieving this objective include: education and outreach; development and implementation of management plans to identify, minimize, and address threats; management, control, and elimination of nonnative predators, herbivores, and invasive plants; consultation and coordination with the Service; and control of erosion. These actions are discussed briefly below and in greater detail in the five-factor analysis.

The Navy has taken steps to eliminate incidental impacts to the island night lizard by educating all Navy personnel stationed on San Clemente and San Nicolas Islands. All Navy personnel receive handouts, pamphlets, or posters presenting information on the

distribution, threats, and management responsibilities of sensitive resources, such as federally threatened and endangered species, including the island night lizard. The NPS has also taken steps to eliminate incidental impacts to the lizard by educating all visitors to Santa Barbara Island (including Sutil Island). Brochures discussing the island's unique wildlife, including the island night lizard, as well as maps of designated trails that all visitors must use to decrease disturbance to wildlife and lessen damage to resources, are available to all visitors of the island at the visitors' center or online at the Channel Islands National Park's Web site (*http://www.nps.gov/chis/index.htm*).

The Recovery Plan also recommends that existing laws and regulations be used to protect candidate, threatened, and endangered species, including the island night lizard. Based on the occurrences of this species on federally owned land, the primary laws with potential to protect the island night lizard include the National Environmental Policy Act (NEPA), the Sikes Act Improvement Act, NPS Organic Act, Federal Noxious Weed Act, Soil Conservation and Domestic Allotment Act, and the Act.

NEPA requires Federal action agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. Since its enactment in 1970, the Navy has implemented NEPA for actions on San Clemente and San Nicolas Islands, and the NPS has implemented NEPA for actions on Santa Barbara Island (including Sutil Island).

Pursuant to the Sikes Act Improvement Act of 1997, the Navy adopted INRMPs for San Clemente Island in 2002 and San Nicolas Island in 2010 that help guide the management and protection of each island's natural resources (Navy 2002; Navy 2010). INRMPs incorporate to the maximum extent practicable, ecosystem management principles and provide the landscape necessary to sustain military land uses. Each INRMP includes specific management actions and objectives to address the Recovery Plan task of incorporating recovery actions into existing management plans (see *Factor D* below). Through these mechanisms, the Navy is required to identify and address all threats to federally listed species during the INRMP planning process. If possible, threats are ameliorated, eliminated, or mitigated through this procedure. The Navy strives to fulfill this objective through both internal planning (INRMP) and compliance with Federal law (consultations with the Service under the Act and preparing environmental review documents under NEPA). The actions taken by the Navy under the INRMPs have not completely eliminated all adverse impacts, but many threats to island night lizards have been greatly reduced. These contributions to the elimination of adverse impacts fulfill a majority of this objective with respect to island night lizard as stated in the Recovery Plan.

Since listing of the Island night lizard under the Act in 1977, the Navy and NPS have had a history of consultation and coordination with the Service regarding the effects of various activities on the island night lizard on San Clemente, San Nicolas, and Santa Barbara Islands.

*Objective 2: Protect known resources from further degradation by: (a) Removing feral herbivores, carnivores, and selected exotic plant species; (b) controlling unnatural erosion in sensitive locations; and (c) directing military operations and adverse recreational uses away from biologically sensitive areas.*

In 1992, the Navy fulfilled a major part of this objective by removing the last of the feral goats and pigs from San Clemente Island. Currently, the Navy has an ongoing predator control program to trap and remove feral cats and rats from San Clemente Island. From 2009 to 2010, the Montrose Settlements Restoration Program (MSRP) assisted the Navy by removing all feral cats from San Nicolas Island. In 1981, the last of the European rabbits (a nonnative herbivore) were removed from Santa Barbara Island. These actions to remove predators and nonnative herbivores, or develop removal programs for potential predators, have fulfilled this component of objective 2 in the Recovery Plan to remove feral and nonnative animals. Additionally, the Navy on both San Clemente and San Nicolas Islands, in accordance with the Federal Noxious Weed Act and through implementation of the Navy's INRMPs, conducts actions to reduce or eliminate all transport of nonnative plants to each island, and has facilitated programs to remove nonnative taxa that currently occur on the islands. On Santa Barbara Island, the NPS implements policies and management activities (in accordance with the Organic Act) that restrict all nonnative plant species from the island. Additionally, in partnership with the MSRP, nonnative plant removal is currently occurring on Santa Barbara Island. These actions to control nonnative plants on all islands occupied by the island night lizard

have fulfilled most of this component of objective 2 in the Recovery Plan to remove exotic plant species.

The Navy is also taking steps to minimize the effects of erosion on San Clemente Island. Erosion control measures are being incorporated into project designs to minimize the potential to exacerbate existing erosion (O'Connor 2009, pers. comm.). Along with the Navy's planned expansion of its military operational areas, the Navy is developing an erosion control plan that will minimize soil erosion within and adjoining the operational areas (Navy 2008b, pp. 5–30; Service 2008 p. 62). The proposed erosion control plan includes development and application of best management practices (BMPs) such as: establishing setbacks and buffers from steep slopes, drainages, and sensitive resources; constructing site-specific erosion control structures; conducting revegetation and routine maintenance; and monitoring and adjusting the BMPs as appropriate. While the erosion control plan is being prepared, the Navy has postponed all major battalion movements and training, and is using BMPs to minimize erosion when creating and approving projects that might contribute to erosion on the island. The Navy has taken steps to reduce the threat of erosion on the island and contribute to the achievement of this objective.

Through implementation of INRMPs on San Clemente and San Nicolas Islands, the Navy conducts measures to avoid areas with highly erodible soils. Additionally, San Clemente has a nursery to grow native island plants, which are then used to assist in erosion control of disturbed sites. San Nicolas Island has developed a nursery for similar

erosion control measures. On Santa Barbara Island, NPS requires the active preservation of soil resources and the avoidance or minimization of impacts to soil. These actions to prevent erosion fulfill this component of objective 2 of the Recovery Plan.

As recommended by the INRMP, the Navy established the Island Night Lizard Management Area (INLMA), which is avoided to the maximum extent practicable to assist with the recovery of the island night lizard and its habitat. Additionally, through implementation of INRMPs on both San Clemente and San Nicolas Islands, the Navy defines and marks work areas to prevent lizard mortality. The NPS has designated trails on Santa Barbara Island to allow visitors to view the island's ecosystems without being obtrusive or destructive to the natural resources. These actions to avoid biologically sensitive areas fulfill objective 2 with respect to island night lizard as stated in the Recovery Plan.

*Objective 3: Restore habitats by revegetating disturbed areas using native species.*

To restore the structure and function of native island ecosystems, the Navy, through implementation of its INRMP on San Clemente Island, has developed the Native Habitat Restoration Program and constructed a native plant nursery where plants, including species that provide a benefit to island night lizard habitat, are grown from seed, and stem and root cuttings, and outplanted annually. Additionally, the MSRP currently grows native plant species in a nursery on Santa Barbara Island to support

island night lizard restoration projects. To date, approximately 15,000 native plants, some providing a benefit to the island night lizard, have been restored to Santa Barbara Island. These actions to restore habitat by revegetation fulfill the objective as stated in the Recovery Plan.

*Objective 4: Identify areas of San Clemente Island where habitat restoration and population increase of certain addressed taxa may be achieved through a careful survey of the island and research on habitat requirements of each taxon.*

Since listing, research on the life history and biology of the island night lizard has been ongoing on San Clemente Island. Research has determined the island night lizard's distribution and density in various habitats on San Clemente Island (Mautz 1993; Mautz 2001a). Additionally, the Navy developed the INLMA (as part of the 2002 INRMP) to conserve the largest area of high-quality habitat with the highest densities of island night lizards. The Navy currently avoids and minimizes impacts to the lizard for any projects or training activities proposed in this area through consultation with the Service. Thus, these actions completely fulfill the objective as stated in the Recovery Plan.

*Objective 5: Delist or upgrade the listing status of those taxa that achieve vigorous, self-sustaining population levels as the result of habitat stabilization, restoration, and preventing or minimizing adverse human-related impacts.*

Since listing, threats to the island night lizard have been largely ameliorated, including removal of all nonnative herbivores from San Clemente and Santa Barbara Islands and removal of feral cats from San Nicolas Island. Given that habitat types that are strongly associated with island night lizards appear to be increasing slowly through natural recovery and restoration projects, as well as the amelioration of all substantial threats to the island night lizard, the populations on the three islands appear to be stable. Remaining threats, such as nonnative plants, land use and development, fire, and erosion, are potentially of concern, but are actively managed through implementation of management plans and measures described in the Navy's INRMPs and NPS's management policies and active management plans. Thus, the objective to improve the status of the island night lizard to the point it can be delisted has been fully met.

*Objective 6: Monitor effectiveness of recovery effort by undertaking baseline quantitative studies and subsequent follow-up work.*

Since listing and publication of the Recovery Plan, island night lizard monitoring has been conducted on San Clemente Island, with one assessment of the population estimated at approximately 21.3 million island night lizards. Although no subsequent population assessments have occurred since 2001, ongoing monitoring of individual body condition and neonate-to-juvenile ratios indicates the density of island night lizards still strongly corresponds to certain vegetation types. Assessments of the extent and quality of those habitats have been conducted more recently, as discussed below in more detail.

San Clemente Island supports the largest amount of high-quality island night lizard habitat. Monitoring from 1992 to 2008 has shown fluctuating short-term trends, but no clear long-term trend, in *Opuntia* spp. or *Lycium californicum* habitats on San Clemente Island (Tierra Data Inc. 2010, pp. 48–67). However, there was an approximate 6 percent reduction of *L. californicum* and 10 percent reduction of *Opuntia* spp. in percent cover of those habitats on the island (Tierra Data Inc. 2010, pp. 48–67). This reduction was likely due to high rainfall experienced in the baseline years from 1991 to 1993, in comparison to subsequent rainfall (Tierra Data Inc. 2010, p. 125). While research has not indicated how this reduction in cover affects island night lizard populations, monitoring surveys and estimates of island night lizard populations indicate the species remains abundant in suitable habitat. We expect continued monitoring on San Clemente Island, including that associated with ongoing and proposed habitat restoration projects, to show island night lizard populations remaining stable or increasing on the island. These monitoring efforts fulfill the objective as stated in the Recovery Plan.

On San Nicolas Island, there has been one assessment of the island night lizard's population in 1998 and two assessments of the vegetation associated with high densities of island night lizards. The first vegetation assessment was conducted in 1998 by Fellers *et al.* (1998). A second vegetation assessment was conducted in 2003 by Junak (2003, p. 7), which indicated an increase in high-quality *Opuntia* spp. and *L. californicum* habitats from 1.9 ac (0.8 ha) in 1998 to 11.2 ac (4.6 ha). This increase was probably due to more

current data and better mapping technology. Monitoring of lizards on San Nicolas Island will be conducted every 5 years by the U.S. Geological Survey in connection with proposed habitat restoration projects (Navy 2010, p. 4.55). Because this species population is strongly correlated with abundance of habitat, and we have seen an increase in available habitat, we expect island night lizard populations to remain stable or increase in number on the island. These monitoring efforts fulfill the objective as stated in the Recovery Plan.

On Santa Barbara Island, there has been one assessment of the island night lizard population and two assessments of the amount of high-quality habitat consisting of *Opuntia* spp. and *Lycium californicum.* The first habitat assessment was conducted from an examination of aerial photographs from 1983 and indicated a total of 14.8 ac (6.0 ha) of *L. californicum* and *Opuntia* spp. habitats (Fellers and Drost 1991, p. 31). However, a new preliminary draft assessment indicates that approximately 16.6 ac (6.7 ha) of *L. californicum* and 9.3 ac (3.8 ha) of *O. oricola* habitats exist in which these species comprise greater than 39 percent of the vegetative cover (Rodriguez 2012, pers. obs.). Additionally, the MSRP continues to restore native habitat on Santa Barbara Island, including species that provide moderate-quality habitat for the island night lizard. Therefore, we expect the island night lizard population to remain stable or increase on Santa Barbara Island. These monitoring actions fulfill this objective as stated in the Recovery Plan.

*Summary of Recovery Plan Implementation*

In summary, while the Recovery Plan does not include taxon-specific downlisting or delisting criteria for the island night lizard, many of the actions identified in the Recovery Plan have been implemented to benefit the lizard. With the exception of a few recommended recovery actions that are still ongoing, nearly all recovery objectives have been fulfilled through research and monitoring efforts on all occupied islands, implementation of the Navy's INRMPs on San Clemente and San Nicolas Islands, and NPS's management policies on Santa Barbara Island. Most significantly, the Navy removed feral goats and pigs from San Clemente Island in 1992. There are currently a number of programs in place to improve habitat suitability, prevent introduction of nonnative species, guide and track management efforts, and protect occurrences of the island night lizard. We investigated other potential threats to the lizard and concluded that they do not pose significant impacts. As a result of the management actions conducted by the Navy and NPS, substantial threats have been ameliorated throughout the species' range and the majority of objectives discussed in the Recovery Plan are fulfilled.

Based on our review of the Recovery Plan, we conclude that the status of the island night lizard has improved due to past and current activities being implemented by the Navy and NPS, and the objectives of the Recovery Plan have been met. The effects of these activities on the status of island night lizard are discussed in further detail below.

**Summary of Factors Affecting the Species**

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for adding species to, reclassifying species on, or removing species from the Federal List of Endangered and Threatened Wildlife (List). We may determine a species to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act. The five listing factors are: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence. We must consider these same five factors in delisting a species. We may delist a species according to 50 CFR 424.11(d), if the best available scientific and commercial data indicate that the species is neither endangered nor threatened for the following reasons: (1) The species is extinct; (2) the species has recovered and is no longer endangered or threatened; or (3) the original scientific data used at the time the species was classified were in error. The five factors listed under section 4(a)(1) of the Act and their analyses in relation to the island night lizard are presented below. This analysis of threats requires an evaluation of both the threats currently facing the subspecies and the threats that could potentially affect it in the foreseeable future, following the delisting and the removal of the Act's protections.

The Act defines an endangered species as a species that is in danger of extinction throughout all or a significant portion of its range (16 U.S.C. 1532(6)). A threatened species is one that is likely to become an endangered species in the foreseeable future throughout all or a significant portion of its range (16 U.S.C. 1532(20)). The word ‘‘range’’ refers to the range in which the species currently exists, and the word ‘‘significant’’ refers to the value of that portion of the range being considered to the conservation of the species. The “foreseeable future” is the period of time over which events or effects reasonably can or should be anticipated, or trends extrapolated.

In considering what factors might constitute threats, we must look beyond the exposure of the species to a particular factor to evaluate whether the species may respond to the factor in a way that causes actual impacts to the species. If there is exposure to a factor and the species responds negatively, the factor may be a threat, and during the status review, we attempt to determine how significant a threat it is. The threat is significant if it drives or contributes to the risk of extinction of the species, such that the species warrants listing as endangered or threatened as those terms are defined by the Act. However, the identification of factors that could impact a species negatively may not be sufficient to compel a finding that the species warrants listing. The information must include evidence sufficient to suggest that the potential threat is likely to materialize and that it has the capacity (i.e., it should be of sufficient magnitude and extent) to affect the species’ status such that it meets the definition of endangered or threatened under the

Act.

*Factor A: The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range.*

At the time of listing (42 FR 40682), the present or threatened destruction, modification, or curtailment of habitat or range was identified as a factor affecting the island night lizards on San Clemente, San Nicolas, and Santa Barbara Islands. Threats attributed to this factor included the introduction of nonnative herbivores and the continuing negative effects of overgrazing on the native vegetation, including those plants identified as island night lizard habitat (42 FR 40682, pp. 40683–40684). The introduction of nonnative plant species was also discussed in the listing rule (42 FR 40682, p. 40684), although under the *Factor E* section. Since listing, and as identified in the 2006 5-year review of the island night lizard (Service 2006, pp. 10–24), threats from nonnative plants, land use or development, and fire also were considered potential threats to island night lizard habitat and are discussed under *Factor A.* The 2012 5-year review addressed the potential threat of erosion to island night lizard habitat or range under *Factor A* (Service 2012a, pp. 26–27), and thus it is also included in this discussion. And finally, we include discussion on potential impacts of climate change to habitat under *Factor A* (as well as *Factor E* as it relates to impacts to individuals of the species itself).

Nonnative Animals

At listing we determined that overgrazing by introduced nonnative herbivores was a threat to the island night lizard on all occupied islands throughout the species' range (42 FR 40682, pp. 40683–40684). Nonnative herbivores were introduced to San Clemente, San Nicolas, and Santa Barbara Islands during the mid-1800s to the mid-1900s, resulting in the degradation of lizard habitat (42 FR 40682, pp. 40682–40683; Navy 2002, pp. 3.34–3.35; Navy 2005, p. 7). In both the 2006 and 2012 5-year reviews, the Service reported that all nonnative herbivores had been removed from these islands and concluded that habitat destruction or modification from the introduction of nonnative herbivores was no longer a threat to the species now or in the future (Service 2006, pp. 11–12; Service 2012a, p. 19).

*San Clemente Island*

Introduced nonnative herbivores and omnivores have historically and adversely impacted the quantity and quality of habitat and food sources for the island night lizard on San Clemente Island. The last of the nonnative grazing animals was removed from San Clemente Island by 1992; however, the effects of overgrazing, such as depletion of native plants, remain prominent on the central plateau and terraces between canyons on the southern portion of the island. To monitor the response of vegetation to the removal of these nonnative grazers, the Navy implemented a long-term monitoring program from 1992 to 2008 (Tierra Data Inc. 2010). The analysis from the monitoring program

indicated a slight reduction in the percent cover of *Lycium californicum* and *Opuntia* spp. habitats on San Clemente Island. This apparent decline is likely due to an overestimate in the baseline years from 1991 to 1993 resulting from higher rainfall, compared to a reduction in rainfall in subsequent years (Tierra Data Inc. 2010, pp. 48–67). This slight reduction in percent cover is not a cause for concern because this habitat remains well-distributed across the western terraces of the island where there was less grazing impact and where the Navy has established the INLMA. The Navy has no intention of reintroducing large nonnative herbivores to San Clemente Island and has a "no pets policy" to control the introduction of any nonnative species (Navy 2002, p. 3.119). Because the major threat to habitat (nonnative herbivores) has been eliminated and the Navy has an active habitat management and restoration program, as described below, we expect the amount and distribution of habitat to remain relatively stable in the future, although some fluctuation is expected related to variable rainfall.

To restore the structure and function of native island ecosystems impacted by nonnative herbivores, the Navy implements a Native Habitat Restoration Program (NHRP) on San Clemente Island (Navy 2002, p. 3.51). As part of that program, the Navy operates a native plant nursery that supports habitat restoration projects for native species such as the San Clemente Island loggerhead shrike (*Lanius ludovicianus mearnsi*) and island night lizard. Plants propagated at the nursery include species that benefit the island night lizard, such as *Lycium californicum, Artemisia californica,* and *Coreopsis gigantea* (Navy 2002, p. 3.51). The Navy outplants at several locations each year to

promote native species (Munson 2011, pers. obs.). The Navy has also planted *L. californicum* at Wilson Cove on the northeastern side of San Clemente Island for restoration of areas disturbed by military activities (Munson 2011, pers. obs.). These restoration efforts implemented by the Navy have improved the abundance of native habitat on San Clemente Island and have provided a benefit to multiple species, including the island night lizard.

*San Nicolas Island*

Although nonnative herbivores were not present on San Nicolas Island at the time of listing (42 FR 40682), the island has a history of grazing activities prior to listing that resulted in impacts on native plant communities. The compounding effects of overgrazing and wind erosion allowed for the emergence of sand dunes on San Nicolas Island, which do not provide habitat for island night lizards (Dunkle 1950, p. 262; Schwartz 1994, p. 173). More recently, in 2011, the Navy completed a Biosecurity Plan for San Nicolas Island to prevent the transport and establishment of nonnative vertebrate species on the island (Navy 2011, p. 1) (See discussion under *Factor C: Disease or Predation* below). The goal is to protect the existing biodiversity on the island by preventing further degradation of habitat on the island from grazing activities now and in the future. Additionally, the Navy is in the process of developing a habitat management and restoration program to improve the abundance of native plant species on the island. To assist in habitat restoration activities on San Nicolas Island (see Land Use and

Development section below), the Navy has created a plant nursery that will yield plants, including species identified as components of island night lizard habitat for future restoration projects on San Nicolas Island (Ruane 2013, pers. comm.).

We anticipate no future impacts to island night lizard habitat as a result of nonnative herbivores, and we expect the amount and distribution of habitat to remain relatively stable in the future (although some fluctuation is expected related to variable rainfall) because: (1) The major threat to habitat (nonnative herbivores) was eliminated from San Nicolas Island, thus preventing further reduction of lizard habitat from this threat; and (2) the Navy is in the process of developing a habitat management and restoration program.

*Santa Barbara Island and Sutil Island*

Island night lizard habitat on Santa Barbara Island was modified due to the introduction of nonnative herbivores such as European rabbits, which heavily impacted the quantity and quality of habitat for the island night lizard. European rabbits were removed from Santa Barbara Island by 1981 (Sumner 1959, p. 5; Fellers and Drost 1991, p. 70, p. 354; Knowlton *et al.* 2007, p. 535). The NPS currently has a nonnative species prevention policy that restricts bringing any animal onto the island (NPS 2012). Since the removal of nonnative herbivores, Santa Barbara Island native plant communities, such as *Artemisia* spp., *Lycium californicum*, and others, have shown resurgence and are

increasing in extent (Fellers and Drost 1991, p. 70). Research conducted on Santa Barbara Island from 1982 to 2002 showed an increase in native island night lizard plant communities of *Opuntia littoralis* and *Eriogonum giganteum*, but a decline in *O. prolifera* (Corry 2006, pp. 51–53).

Since 2007, the MSRP has conducted native plant restoration projects on Santa Barbara Island (Harvey and Barnes 2009, pp. 15–22) to benefit Xantus's Murrelet (*Synthiliboramphus hypoleucus*) and Cassin's Auklet (*Ptychoramphus aleuticus*) (Harvey and Barnes 2009, p. 4). Many of the native plants used in these restoration projects also provide island night lizard habitat, such as low- to moderate-quality habitat (*Coreopsis gigantea*, *Eriogonum giganteum* var. *compactum*, *Deinandra clementine*, *Eriophyllum nevinii*, *Artemisia nesiotica* (sage), and *Baccharis pilularis*) and high-quality habitat (*Lycium californicum*) (Fellers and Drost 1991, p. 34; Fellers *et al.* 1998, pp. 11–12; Harvey and Barnes 2009, p. 7; Mautz 2001a, p. 23; Navy 2005, p. 30). Since 2007, the MSRP has restored approximately 5 ac (2 ha) of native habitat on Santa Barbara Island, consisting of approximately 15,000 native plants (Little 2011, pers. obs.). Because the major threat to habitat (nonnative herbivores) has been eliminated and the NPS has an active habitat management and restoration program, we expect the amount and distribution of habitat to remain relatively stable in the future.

Nonnative Plants

At listing, the introduction of nonnative plants was noted as having adversely impacted all California Channel Islands (42 FR 40682, p. 40684). While the introduction of nonnative herbivores impacted much of the native vegetation, nonnative plants introduced to the islands have also modified habitat for the island night lizard. In the 2006 5-year review, we noted that nonnative plant species may alter ecosystem dynamics by changing soil nitrogen cycling, and may compete with native plants for space or other resources such as light, water, and nutrients (Service 2006, p. 12). Nonnative plant species can also alter ecological processes such as fire frequency that otherwise could affect the persistence of the island night lizard (Navy 2002, p. 3.114). Low densities of lizards observed in some of the nonnative plant communities suggest that modification of the native plant communities can reduce the available resources for this taxon. The 2006 and 2012 5-year reviews of the island night lizard found that habitat destruction or modification from the introduction of nonnative plants is of potential concern, but due to current management and preventative actions implemented on all occupied islands, is not a substantial threat to the species throughout its range now and in the future (Service 2006, p. 13; Service 2012a, pp. 20–22).

*San Clemente Island*

Nonnative plants were introduced to San Clemente Island approximately 200 years ago and, in combination with periods of extended drought and overgrazing in the late-1800s, have changed the composition and structure of the vegetative communities on

the island (Navy 2002, p. 3.31). The introduction of nonnative plant species to the island has resulted in the loss of adequate shrub cover and proliferation of annual grasses on parts of San Clemente Island (Service 1997, p. 7). The most noticeable changes have occurred in the northern grasslands and dune systems (Navy 2002, p. 3.31).

Nonnative plant introduction can occur on San Clemente Island as a result of equipment and materials transported to the island from the mainland (Service 1997, p. 7) and potentially seeds deposited by birds. Seeds and propagules of nonnative plants adhere to vehicles in mud or soil, and can also be brought onto the island in gravel used for road maintenance (Service 1997, p. 7). The predominant nonnative plant species on San Clemente Island include *Foeniculum vulagare* (fennel), *Carpobrotus* spp. (iceplant), *Salsola* spp. (Russian thistle), and several abundant nonnative annual grasses (Service 1997, p. 7).

Research evaluating the percent cover of nonnative plant species in plot transects on San Clemente Island was conducted from 1992 to 1996, 2000, 2002, 2003, 2006, and 2008 (Tierra Data Inc. 2010, p. 26). Although likely attributed to higher rainfall totals from 1991 to 1993 compared with drought conditions from 2002 to 2003 and in 2006, results indicate an approximately 20 percent decrease in percent cover among nonnative plant species, from baseline data collected during the 1992 to 1993 field season (Tierra Data Inc. 2010, p. 125).

Habitat destruction or modification from nonnative plants is a potential concern, but not currently a substantial threat to the island night lizard due to current management efforts on San Clemente Island. Although previous invasions of nonnative plants probably occurred through introduction of plants preferred for livestock grazing, current nonnative species invasions are typically introduced by equipment used during military activities on the island. The potential pathways for the introduction of nonnative plants to San Clemente Island are many, including human activities and seeds deposited by birds. Due to the continued risk of nonnative plant species, the Navy monitors for new introductions and when found, treats them appropriately (Service 2008, pp. 58–59). In accordance with the Federal Noxious Weed Act and as implemented through objectives set forth within the Navy's INRMP, the Navy continues to reduce the risk of introducing additional nonnative plants to San Clemente Island and manage the removal of nonnative plant taxa already occurring on the island (Navy 2002, p. 3.116). The Navy's objectives on San Clemente Island are as follows:

(1) Use of only native species in landscaping (Navy 2002, p. 3.116); and

(2) Wash all vehicles and equipment used in construction or training activities prior to coming onto the island, including high-pressure spraying to the underside and wheel wells to remove mud and weed seed (Navy 2002, p. 3.116).

Additional nonnative plant management techniques described within the INRMP include: controlled burns, mechanical removal, and herbicide treatment (Navy 2002, pp.

3.115–3.116). Although nonnative plants will continue to pose a risk to island night lizard habitat, the Navy has taken steps to curtail habitat and plant community alteration by nonnative plants and such steps are expected to continue into the future.

The Navy has implemented an NHRP on San Clemente Island to restore the structure and function of native island ecosystems (Navy 2002, p. 3.51). To assist the NHRP, the Navy has constructed a native plant nursery where plants are currently grown from seed or stem and root cuttings (see discussion above in the Nonnative Animals section). Impacts to island night lizard habitat from nonnative plants may be a persistent low-level threat, but due to implementation of the Navy's INRMP, current nonnative species management, and native species restoration, nonnative species are not currently, nor do we see them becoming in the future, a substantial threat to the lizard on San Clemente Island.

*San Nicolas Island*

The introduction of nonnative plants, combined with the effect of nonnative herbivores on San Nicolas Island, has limited the quantity of high-quality island night lizard habitat. The most recent information indicates that just over half of the 278 plant taxa on San Nicolas Island are nonnative species, and that San Nicolas Island has the highest proportion (approximately 51 percent) of nonnative plant taxa of any of the eight Channel Islands (Junak 2008, p. 67).

Many potential pathways exist for the introduction of nonnative plants to San Nicolas Island, including human activities and seeds deposited by birds. Due to the continued risk of nonnative plant species being introduced to the island, the Navy monitors for nonnative plant introductions and when found, treats them appropriately (Service 2008, pp. 58–59).

In accordance with the Federal Noxious Weed Act, and as implemented through objectives set forth within the Navy's INRMP, the Navy continues to reduce the risk of introducing additional nonnative plants to San Nicolas Island and manage the removal of nonnative plant taxa already occurring on the island (Navy 2010, p. 4.75–4.76). The Navy's objectives on San Nicolas Island are as follows:

(1) Require vehicles and equipment to be cleaned prior to shipment to the island and between uses at different island construction sites, document that all gravel and fill materials brought to the island are certified weed free, and prohibit the use of nonnative plants for landscaping unless specifically approved by the Environmental Division (Navy 2010, p. 4.75).

(2) Require that native plant species be used for landscaping unless specifically approved (Navy 2010, p. 4.76).

(3) Inspect barge and aircraft before they leave the mainland or for transport arriving directly from other ports or airports, inspect prior to disembarking on San Nicolas Island (Navy 20010, p. 4.76).

Additionally, the Navy treats and monitors select nonnative species annually on San Nicolas Island, such as *Brassica tournefortii* (Saharan mustard) and *Foeniculum vulgare* (fennel) (Ruane 2011, pers. obs.). We anticipate that implementation and continued efforts in the future of the measures described above will remove existing nonnative plants and reduce the rate of introduction of these nonnatives on San Nicolas Island. Therefore, we do not consider nonnative species to be a substantial threat to the lizard now or in the future.

*Santa Barbara Island and Sutil Island*

Historically, Santa Barbara Island consisted of a native shrubland that provided habitat for the island night lizard; however, the introduction of nonnative herbivores and nonnative plants to the island has modified the native habitat to a more herbaceous-dominated habitat that is not as readily used by the lizard (Halvorson *et al.* 1988, p. 109). The native scrub cover that once dominated Santa Barbara Island is currently inundated by a nonnative annual grassland community throughout half of the eastern terrace of the island (Halvorson *et al.* 1988, p. 113). Transect data collected on Santa Barbara Island from 1984 to 2002 indicated a reduction in percent cover of some native plants (*Hemizonia clementina* and *Opuntia prolifera*) that provide low- to moderate-quality habitat for the island night lizard (Corry and McEachern 2009, p. 208). However, data indicate an increase in average combined and percent cover for many other native plant

species on the island that provide habitat for the island night lizard (*Coreopsis gigantea, Baccharis pilularis, Eriogonum giganteum v. compactum, Opuntia littoralis,* and *Lycium californicum*) (U.S. Geological Survey (USGS) 2001, p. 6, Appendix A; Corry and McEachern 2009, pp. 206–208). Recovery of low- to moderate-quality island night lizard habitat is expected to occur through the natural expansion of native shrub habitat into nonnative grasslands (USGS 2001, p. 6).

The NPS recognizes the potential threat of nonnative plant species and is taking steps to reduce the risk of new introductions. Current NPS management policy, in accordance with the NPS Organic Act, dictates that the NPS will control detrimental nonnative species for the protection of native species' habitats (NPS 2006b, p. 45). In 2007, the MSRP began propagating a native stock of seeds (which were previously collected on Santa Barbara Island) at the Channel Islands National Park greenhouse (Harvey and Barnes 2009, p. 7). Species propagated at the greenhouse included those found within low- to moderate-quality island night lizard habitat, such as *Coreopsis gigantea, Eriogonum giganteum* var. *compactum, Deinandra clementina, Eriophyllum nevinii, Artemisia nesiotica, Baccharis pilularis*, and high-quality habitat, such as *Lycium californicum* (Fellers and Drost 1991, p. 34; Fellers *et al.* 1998, pp. 11–12; Mautz 2001a, p. 23, Navy 2005, p. 30). To date, the MSRP has restored approximately 5 ac (2 ha) of native habitat for seabirds on Santa Barbara Island (Little 2011, pers. obs.). This restoration effort has outplanted approximately 15,000 native plants to the island, some of which as discussed above, provide habitat for island night lizards (Little 2011, pers. obs.).

Additionally, from 2007 to 2011 the NPS in coordination with the MSRP conducted nonnative plant species removal from Santa Barbara Island on 4.5 ac (1.8 ha) (Harvey 2012, pers. comm.). The NPS began drafting a General Management Plan for the Channel Islands that will address the continuing effort to monitor and restore native vegetation on Santa Barbara Island (Faulkner 2011, pers. comm.); this plan is not yet completed. Due to current and future management efforts described above, we do not consider nonnative species a substantial threat to the lizard on Santa Barbara Island now or in the future.

Land Use and Development

At listing (42 FR 40682), the destruction or modification of habitat from land use and development was not identified as a threat to the island night lizard. The 2006 and 2012 island night lizard 5-year reviews concluded that land use and development is not a substantial threat to the species or its habitat on any of the three occupied islands (Service 2006, p. 18; Service 2012a, pp. 22–24).

*San Clemente Island*

San Clemente Island is owned and administered by the Navy and provides operating facilities and support services for the U.S. Pacific Fleet. Activities on and around the island include aviation training, undersea warfare, amphibious warfare,

special warfare, and Joint Task Force exercises (Navy 2002, pp. 2.1–2.2). There are more than 300 buildings and structures on the island, including an airstrip on the far northern part of the island. Several quarries and borrow pits are used to provide materials for road construction and maintenance. Intensive training, foot traffic, and construction activities impact island night lizards in the areas where such activities occur. However, most of the buildings and structures are located on the far northern and far southern parts of San Clemente Island, while most of the high-quality *Lycium californicum* and *Opuntia* spp. habitats are found on the western portion of the island (Navy 2002, pp. 2–14). The western portion of the island receives little training use because it is recognized by the Navy to contain high-quality lizard habitat (Navy 2002, p. 3.82). The INLMA was created on this portion of the island to provide a focus area for island night lizard management activities (see *Factor D*), including habitat restoration, to offset the effects of surface-disturbing construction projects (Service 2008, p. 200).

In 2008, the Navy initiated consultation with the Service, pursuant to section 7 of the Act, for proposed new training activities for San Clemente Island (Service 2008, p. 11). Many of the proposed activities covered by the consultation occur in areas already receiving sustained use by the military (Service 2008, p. 10). We estimated that from 2009 to 2014, approximately 2.5 percent of the island night lizard population on San Clemente Island could incidentally be harmed or killed through modification of habitat resulting from these proposed activities. These adverse impacts were associated with increased fires, off-road assault vehicle use, construction of buildings, and other military-

related activities (Service 2008, pp. 10, 206). However, we concluded that this potential loss would not jeopardize the continued existence of the species or appreciably reduce its recovery (Service 2008, pp. 205, 209).

While island night lizard habitat loss and disturbance occur on San Clemente Island as a result of military land use and development projects such as training and testing activities, the impacts of these activities are of minor consequence given the size of the island, the amount of suitable habitat that remains for the species, the distribution of the island night lizard population across the island, the size of the species' population on the island, and the avoidance of areas designated for island night lizard management. Therefore, we do not consider land use and development a substantial threat to the island night lizard or its habitat on San Clemente Island now or in the future.

*San Nicolas Island*

Since 1944, San Nicolas Island has been part of the Naval Air Warfare Center Weapons Division Sea Range, managed by the Naval Air Weapons Station at China Lake, California. The island currently houses approximately 200 Navy personnel that occasionally conduct small-scale training exercises. The island also serves as a launch platform for missile testing (Navy 2002, p. 10). Facilities on the island are used to conduct radar tracking and control, range surveillance, telemetry, and communications for weapons testing (Navy 2005, pp. 6, 10). There are approximately 156 buildings and

structures on San Nicolas Island, along with 47 mi (76 km) of paved and unpaved roads (Navy 2005, p. 6.) Additionally, a 10,000-foot (ft) (3,048-meter (m)) concrete and asphalt runway occupies a mesa on the eastern part of the island and, in 1989, a missile testing and pilot training impact area was established (Navy 2005, pp. 6, 19).

Since listing, some permanent loss of island night lizard habitat has occurred from the development of structures and mission-essential activities. Island night lizards and their habitats do not generally occur in launching areas and thus are not likely to be affected by the activities that occur there (Service 2001, p. 19). Of the 11 patches of high-quality habitat identified by Fellers *et al*. (1998, p. 61), 1 is in close proximity to the airstrip and 3 others are in the proximity of existing structures (Navy 2005, p. 8). On average, less than five projects per year have potential to impact lizards, such that relocation of individuals may be required into adjacent habitat. Most of those projects are generally small – approximately 0.01 ac (0.004 ha) (Smith 2009, pers. comm.). Habitat is re-created in these circumstances by piling cut *Opuntia* spp. pads on top of boards and placing them into the adjacent area (Smith 2009, pers. comm.). The wooden boards provide temporary habitat for the lizards while the *Opuntia* spp. cuttings take root. Island night lizards have not been monitored after relocations; thus, there is no information available to determine the success of these actions. Although high-quality *Opuntia* spp. and *Lycium californicum* habitats are limited on San Nicolas Island, overall land use on the island is not intensive and measures are implemented consistent with the INRMP to try to safely relocate island night lizards that may be impacted by projects.

As part of a consultation with the Service on the effects of a new wind energy project on San Nicolas Island, a biological opinion (8-8-10-F-35) was completed on August 26, 2010, and subsequently amended (814402011-F-0060) on April 22, 2011. During a 4- to 5-year span beginning in 2010, the Navy will install up to 11 wind-powered turbines and an energy storage facility on San Nicolas Island (Service 2010, p. 3). The Service expects this wind energy project to adversely affect the island night lizard by increasing indirect effects of predation by American kestrel (*Falco sparverius*) and barn owls (*Tyto alba*), causing injury or death of individual lizards by foot traffic and construction, and habitat loss and loss of habitat connectivity (Service 2011, pp. 5–7). However, the Navy will implement numerous measures in accordance with management practices stated in the INRMP to reduce the project's effects on the island night lizard: avoidance and minimization measures (including capture and relocation); species monitoring; management of nonnative plant species; erosion control; and contaminant cleanup (Service 2011, p. 5). We concluded in that biological opinion that we do not expect the effects of the proposed project to jeopardize the continued existence of the island night lizard (Service 2011, p. 8).

While island night lizard habitat loss and disturbance occurs on San Nicolas Island as a result of military land use and development, the impacts of these activities are minimal and the Navy conducts adequate management efforts to minimize the effects on the island night lizard. Therefore, we do not consider land use and development a

substantial threat to the island night lizard or its habitat on San Nicolas Island now or in the future.

*Santa Barbara Island and Sutil Island*

Minimal land use activities have occurred on Santa Barbara Island. Farming occurred on Santa Barbara Island from the mid-1800s to early 1900s when portions of the east and west terraces were cleared for agriculture; however, the farming effort was largely unsuccessful and it appears that all farming practices ceased by 1926 (Corry 2006, p. 19). Santa Barbara Island is now managed as a unit of the NPS, with land management focused on the preservation of natural, archaeological, and aesthetic resources (NPS 2006b, pp. 44–62). A visitor center and camping area is located in proximity to a cove area that serves as a landing spot for visitors to the island (NPS 2011a). Public use of the island is limited to primitive camping, hiking, wildlife observation, and other nonconsumptive uses (NPS 20011b). With the exception of potential fire caused by human-related activities (see Fire discussion below), land use is not a substantial threat to the island night lizard or its habitat on Santa Barbara Island due to active management efforts, existing regulatory mechanisms (see discussion of the Organic Act below under *Factor D*), and current management policies, which are expected to continue in the future.

Fire

At listing (42 FR 40682), fire was not identified as a threat to the island night lizard or its habitat. Historically, ranching operations were conducted on San Clemente and San Nicolas Islands, with vegetation periodically burned to facilitate planting of feed crops for nonnative herbivores (Navy 2002, p. 3.28; Navy 2005, p. 7). Fire would normally be a rare occurrence on San Clemente, San Nicolas, and Santa Barbara Islands, but human use and occupancy of the islands have increased the incidence of wildfires on all three islands to varying degrees.

Since the time of listing, we have identified fire as a potential impact to island night lizard. On San Clemente and San Nicolas Islands, this potential threat is associated with military activities and the introduction of nonnative annual grasses, which increase the availability of readily flammable fuels (Service 2006, p. 13; Service 2012a, pp. 25–27). Vegetative communities including *Lycium californicum*, *Opuntia prolifera*, and *Coreopsis gigantea*, which support moderate to high island night lizard densities, are intolerant of and not well adapted to fire (Navy 2002, pp. 3.59–3.61; Sawyer *et al.* 2009, pp. 483, 588, 600). However, *Opuntia littoralis* may be more tolerant of fire, though it is not fire-dependent for germination (Navy 2002, pp. 3.60–3.61). Where fires do occur, they may destroy lizard habitat which reduces cover that assists with thermoregulation, increases exposure to predators, creates a short-term reduction in prey availability, and potentially harms individuals (Mautz 2001, p. 27; Service 2006, p. 13). Although the potential for fire exists on San Clemente, San Nicolas, and Santa Barbara Islands, it is not

considered a substantial threat. The potential for human-caused ignition on San Nicolas Island and Santa Barbara Island is considered low due to the limited amount of human activities that might initiate a fire. In addition, all islands currently implement fire management policies, as discussed below under each island description (Service 2006, pp. 13–15; Service 2012a, pp. 25–27).

*San Clemente Island*

The use of San Clemente Island for military training and testing has led to a higher number of fires on the island than would otherwise be expected to occur naturally as a result of lightning. Military activities contribute to fires that may adversely affect listed plants and wildlife on San Clemente Island (Service 2008, p. 3). The southern portion of the island has the greatest risk due to the ship-to-shore bombardment that occurs in the area (Service 2008, pp. 56–57). Additionally, the presence of combustible nonnative grasses in combination with military activities could increase fire frequency on San Clemente Island (Navy 2002, p. 3.31).

While fire does not appear to affect island night lizard habitat in the short term, an increase in fire frequency or size could negatively affect lizard abundance over time (Mautz 2001a, pp. 27–28). The highest-quality habitat and highest density of lizards occur in areas where fire has not occurred, or has occurred rarely, and the fires are small

in size (Service 1997, p. 60; Navy 2002, p. 3.32). This trend suggests that lizard habitat and abundances are reduced when fires occur more frequently.

Since 1997, the Navy has implemented a number of management measures to reduce the frequency of wildfires on San Clemente Island: prevention measures, such as scheduling operations with high ignition potential outside the fire season and electrical system improvements; containment measures, such as vegetation management and use of prophylactic fire retardants; and suppression measures, such as staging and use of suppression resources (Service 2008, p. 51). Currently, the portions of the island at greatest risk of fire are the impact areas associated with the ship-to-shore bombardment located at the southern end of the island, and areas containing unexploded ordnance in which access for fire prevention has been closed (Service 2008, pp. 56–57).

In 2008, the Navy proposed a new training expansion on San Clemente Island that could potentially increase the occurrence of fire (Service 2008, p. 5). As part of the consultation with the Service on the effects of the new training and testing activities (Service 2008, pp. 2–3), the Navy completed a comprehensive Fire Management Plan (FMP) for San Clemente Island (Navy 2009). The Navy's fire management focuses on military training and other human-related activities and facilities, as these activities represent the primary source of ignition on the island (Service 2008, p. 3). The Navy modifies range and training activities in an effort to prevent fire ignition, containment, and suppression (Service 2008, pp. 3–4). The FMP implements fuel management

strategies consisting of high-intensity fuel management buffer zones; defensible space around structures; and low-intensity landscape modification with prescribed fire that meets fuels management, resource protection, and habitat restoration objectives (Navy 2009, p. ES-3). The FMP concludes that fire does not greatly affect island night lizards on San Clemente Island due to their high numbers and wide distribution across the island, unless the frequency or size of the fire is so high that it removes the necessary thermal cover for long periods of time and over large areas (Navy 2009, pp. 2.26, 2.32).

Through our consultation, we concluded that although these activities may adversely affect island night lizard individuals, fires are not expected to have a significant effect on the island-wide population due to the number of lizards on the island (Service 2008, pp. 203–204). Additionally, we concluded that the fuelbreak and suppression measures outlined within the FMP would prevent a significant increase in fire frequency where high-quality habitat occurs (Service 2008, p. 204).

If intervals between fires are too short, fire can negatively impact *Lycium californicum* and there is a risk of type conversion of the habitat or long-term loss of the shrub community (Navy 2009, p. 4.7). However, prescribed fires may be a useful management tool to control nonnative grasses that degrade native vegetative community values (Navy 2009, pp. 4.7–4.8), specifically in *L. californicum* moderate- and low-density habitat. Because a potential benefit could result from less severe fires in *L. californicum* habitat, fires of moderate-severity will be managed to less than 5 ac (2 ha)

in high-density *L. californicum* habitat (Navy 2009, p. 4.8). In moderate-density *L. californicum* habitat, prescribed burns will be managed to less than 20 ac (8 ha); and in low-density *L. californicum* habitat, prescribed burns will be managed to less than 40 ac (16 ha) (Navy 2009, p. 4.8).

We note that the results of this threat analysis remain consistent with our analysis described in the 2006 and 2012 5-year reviews of the island night lizard, such that the potential of fire posing a threat to island night lizards and their habitat on San Clemente Island exists (Service 2006, pp. 15; Service 2012a, p. 25). However, fire is not currently a substantial threat to the species or its habitat on the island nor do we think it will become so in the future due to historical and current fire patterns, the existence of an FMP for the island, the abundance and distribution of high-quality island night lizard habitat, and high abundance of the species on the island.

*San Nicolas Island*

The potential impacts of fire are a greater concern on San Nicolas Island than San Clemente Island due to the limited amount of island night lizard habitat. Historical grazing from the introduction of nonnative herbivores has resulted in disturbed vegetative communities that favor nonnative plants, specifically nonnative grasses, and increase the vulnerability of these vegetative communities to wildfire (Navy 2010, p. 4.13). Missile launch and termination areas are the most likely sources of potential wildfire ignitions on

San Nicolas Island (Service 2006, p. 15). Despite these conditions, few fires have occurred on San Nicolas Island (Navy 2010, p. 4.12). The risk of wildfire to island night lizards is reduced by the fact that launch sites are located outside of high-quality island night lizard habitat on the northern and western portion of San Nicolas Island (Navy 2005, p. 8, 30). Additionally, a fire station is located on the eastern side of San Nicolas Island (Navy 2005, p. 6), near high-quality *Lycium californicum* and *Opuntia* spp. habitat. Few fires have occurred on San Nicolas Island (Navy 2010, p. 4.12). We have no information to indicate that fire has occurred, or is likely to occur, in the intertidal zone of the unique cobble and driftwood habitat inhabited by island night lizards at Redeye Beach.

The objective of the current fire management strategy on San Nicolas Island, as implemented through the Navy's INRMP, is to protect people, infrastructure, and natural and cultural resources from the harmful impacts of wildfire on the island (Navy 2010, p. 4.14). Strategies to achieve this objective include: preventing wildfire ignitions; providing, maintaining, and upgrading fire management cooperative agreements, memoranda of understanding, and reciprocal agreements to provide maximum protection to cultural resources, natural resources, and the island's infrastructure; developing a fire management plan; and developing a database to track all fires, acres burned, suppression tactics, and individuals involved in the suppression tactics (Navy 2010, pp. 4.14–4.15).

In summary, few fires are known to have occurred on San Nicolas Island. While some wildfire risk is associated with vegetative conditions and military activities, fire management activities appear to be sufficiently managing those risks and are expected to do so into the future. Therefore, fire is not a substantial threat to the island night lizard or its habitat now or in the future.

*Santa Barbara Island and Sutil Island*

Wildfire risk on Santa Barbara Island is less than the other two islands and is primarily related to recreational activities. The National Park Service manages visitation to Santa Barbara Island to ensure the biological and archaeological values of the island are not diminished. Human visitation to Santa Barbara Island is minimal, with only 3,286 on-shore visitors recorded from 2007 to 2010; of these, 2,159 visitors stayed overnight on the island in the primitive campground (NPS 2011a). Although smoking is limited to the cement area adjacent to the visitor center and campfires are not permitted on the island, historical occurrences and potential sources of wildfire on Santa Barbara Island are most likely human-caused, such as campfires, fireworks, or mechanical equipment. Currently, Channel Islands National Park has a Fire Management Plan (CHIS FMP) in place that covers all units of the Park. The CHIS FMP calls for the suppression of all wildfires within the Park and utilization of Minimum Impact Suppression Tactics where feasible to reduce impacts to natural and cultural resources (NPS 2006a, p. 12). Although no resources are available on Santa Barbara Island to suppress wildfires, the

U.S Forest Service's Los Padres National Forest provides firefighting support, including air and ground resources, incident command, communications, and ordering (NPS 2006a, p. 10).

While the potential for fire exists on Santa Barbara Island, it is currently not a substantial threat to island night lizard habitat due to limited human presence on the island, prohibition of fire at campgrounds, and the current CHIS FMP (Service 2006, p. 15; Service 2012a, p. 27), nor is it expected to be a threat in the future.

Erosion

Although erosion was not identified as a threat to the island night lizard at listing (42 FR 40682), the impact from erosion has since been identified as a general threat to the habitats on the Channel Islands. Erosion caused by ongoing military activities on San Clemente and San Nicolas Islands currently affects lizard habitat; however, impacts are primarily a consequence of the historical introduction of nonnative herbivores and land use operations. Due to ongoing management efforts, described below, by the Navy and NPS, the 2006 and 2012 5-year reviews concluded that erosion is not a substantial threat to the lizard or its habitat on any of the occupied islands (Service 2006, pp. 12, 16; Service 2012a, pp. 28–29).

*San Clemente Island*

Historical impacts and natural land processes have resulted in landslides and erosion on San Clemente Island which require active management by the Navy to minimize threats to island night lizard habitat. Landslides occur where steep slopes have been denuded by grazing nonnative animals. The landslides are exacerbated by naturally occurring processes such as wind and water wearing away land surface, posing a concern for species' habitat and affecting other ecological processes on San Clemente Island (Navy 2002, p. 3.22). The Navy, in accordance with the Soil Conservation and Domestic Allotment Act of 1935, as amended (16 U.S.C. S.5901), and as implemented through the Navy's INRMP for San Clemente Island, is required to prevent and control erosion through surveys and implementation of conservation measures (Navy 2002, p. 3.22). Erosion control measures include locating ground-disturbing activities on previously disturbed sites when possible and assuring that all project work areas and transit routes are clearly identified and marked, and by restricting vehicular activities within those areas (Navy 2002, p. 3.23). Additionally, as part of its consultation with the Service on increased training and testing activities, the Navy is developing an erosion control plan and will implement measures to prevent significant impacts to native habitat, including high-quality island night lizard habitat (Service 2008, p. 62). The Navy coordinated with the Service during development of a plan, and submitted a draft version to the Service for review in 2012. The plan has not yet been finalized.

Impacts from erosion on San Clemente Island resulting from historical introduction and overgrazing by nonnative herbivores have been intensified with current land use operations by the Navy. However, we do not consider erosion to be a substantial threat to the island night lizard or its habitat on the island due to current management practices, including: (1) Coordination with the Service to avoid impacts to island night lizard habitat; (2) the Navy's compliance with the Soil Conservation and Domestic Allotment Act of 1935 to prevent and control erosion; and (3) the Navy's INRMP that requires all projects to incorporate erosion control measures into their projects (training maneuvers excluded). The Navy's efforts under the latter two items above are expected to continue in the future should the island night lizard be delisted.

*San Nicolas Island*

Similar to San Clemente Island, erosion is also a concern for island night lizard habitat on San Nicolas Island. Almost all of the high-quality island night lizard habitat consisting of *Lycium californicum* and *Opuntia* spp., and moderate-quality habitat consisting of shrub communities, occur in areas where a moderate to high probability of soil erodibility exists (Navy 2005, pp. 30, 44). Most erosion on San Nicolas Island is due to high winds, effects to vegetation from past sheep grazing, and the island's arid climate (Navy 2005, p. 42). Additional erosion was likely caused by military activities that did not include sufficient erosion control measures (Navy 2005, p. 42). Halvorson *et al.* (1996, p. 25) noted that the north and south slope of San Nicolas Island may need active

restoration for the recovery of native plants due to soil erosion. Fellers (2009, pers. obs.) commented that not much high-quality island night lizard habitat will be lost to unnatural erosion on San Nicolas Island; however, he also found that unnaturally eroded areas on the south slope are lost and cannot be revegetated.

The Navy has incorporated erosion control measures into San Nicolas Island construction projects since 2000 (Navy 2005, p. 42). The Navy will also continue repairing roads to address and reduce erosion (Ruane 2011, pers. comm.). The objective of the current soils conservation management strategy on San Nicolas Island, as implemented through the Navy's INRMP, is to conserve soil productivity, nutrient functioning, vegetation, wildlife habitat, and water quality through effective implementation of best management practices to prevent and control erosion (Navy 2010, p. 4.10).

Erosion on San Nicolas Island was exacerbated by historical land use practices and the introduction of nonnative herbivores (Service 2006, p. 12; Service 2012a, p. 29); residual effects continue to be a potential concern due to the limited amount of, and time required to reestablish, high-quality lizard habitat. Currently, moderate and high-quality island night lizard habitat occurs in areas considered by the Navy to have a moderate- to high-soil erodibility. However, steps are being taken by the Navy to reduce and manage current impacts from erosion on San Nicolas Island and such efforts are expected to continue in the future. Therefore, we do not consider erosion to currently be a substantial

threat to the island night lizard or its habitat on San Nicolas Island now or in the future.

*Santa Barbara Island and Sutil Island*

Erosion from wind, wave action, and the effects of overgrazing are evident on Santa Barbara Island and continue to contribute to alteration of habitat. However, new sources of human-caused erosion on the island, which could exacerbate current conditions, are minimal given the limited amount of human use there. Any new erosion resulting from direct human use would likely be related to erosion along existing trails. Currently, NPS management policies dictate that the NPS will actively preserve soil resources and prevent the unnatural erosion and prevent or minimize potentially irreversible impacts on soil (NPS 2006b, p. 56). Therefore, based on the best available information about current erosion levels and NPS efforts to preserve soil resources, we find that erosion is not a substantial threat to the island night lizard or its habitat on Santa Barbara Island now or in the future.

Climate Change

Our analyses under the Endangered Species Act include consideration of ongoing and projected changes in climate. The terms “climate” and “climate change” are defined by the Intergovernmental Panel on Climate Change (IPCC). The term “climate” refers to the mean and variability of different types of weather conditions over time, with 30 years

being a typical period for such measurements, although shorter or longer periods also may be used (IPCC 2007, p. 78). The term "climate change" thus refers to a change in the mean or variability of one or more measures of climate (e.g., temperature or precipitation) that persists for an extended period, typically decades or longer, whether the change is due to natural variability, human activity, or both (IPCC 2007, p. 78).

Scientific measurements spanning several decades demonstrate that changes in climate are occurring, and that the rate of change has been faster since the 1950s. Examples include warming of the global climate system, and substantial increases in precipitation in some regions of the world and decreases in other regions (For these and other examples, see IPCC 2007, p. 30; and Solomon *et al*. 2007, pp. 35–54, 82–85). Results of scientific analyses presented by the IPCC show that most of the observed increase in global average temperature since the mid-20th century cannot be explained by natural variability in climate, and is "very likely" (defined by the IPCC as 90 percent or higher probability) due to the observed increase in greenhouse gas (GHG) concentrations in the atmosphere as a result of human activities, particularly carbon dioxide emissions from use of fossil fuels (IPCC 2007, pp. 5-6 and figures SPM.3 and SPM.4; Solomon *et al*. 2007, pp. 21–35). Further confirmation of the role of GHGs comes from analyses by Huber and Knutti (2011, p. 4), who concluded it is extremely likely that approximately 75 percent of global warming since 1950 has been caused by human activities.

Scientists use a variety of climate models, which include consideration of natural processes and variability, as well as various scenarios of potential levels and timing of GHG emissions, to evaluate the causes of changes already observed and to project future changes in temperature and other climate conditions (e.g., Meehl *et al*. 2007, entire; Ganguly *et al*. 2009, pp. 11555, 15558; Prinn *et al*. 2011, pp. 527, 529). All combinations of models and emissions scenarios yield very similar projections of increases in the most common measure of climate change, average global surface temperature (commonly known as global warming), until about 2030. Although projections of the magnitude and rate of warming differ after about 2030, the overall trajectory of all the projections is one of increased global warming through the end of this century, even for the projections based on scenarios that assume that GHG emissions will stabilize or decline. Thus, there is strong scientific support for projections that warming will continue through the twenty-first century, and that the magnitude and rate of change will be influenced substantially by the extent of GHG emissions (IPCC 2007, pp. 44–45; Meehl *et al*. 2007, pp. 760–764 and 797–811; Ganguly *et al*. 2009, pp. 15555–15558; Prinn *et al*. 2011, pp. 527, 529). (See IPCC 2007b, p. 8, for a summary of other global projections of climate-related changes, such as frequency of heat waves and changes in precipitation. Also see IPCC 2011(entire) for a summary of observations and projections of extreme climate events.)

Various changes in climate may have direct or indirect effects on species. These effects may be positive, neutral, or negative, and they may change over time, depending

on the species and other relevant considerations, such as interactions of climate with other variables (e.g., habitat fragmentation) (IPCC 2007, pp. 8–14, 18–19). Identifying likely effects often involves aspects of climate change vulnerability analysis. Vulnerability refers to the degree to which a species (or system) is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the type, magnitude, and rate of climate change and variation to which a species is exposed, its sensitivity, and its adaptive capacity (IPCC 2007, p. 89; see also Glick *et al.* 2011, pp. 19–22). There is no single method for conducting such analyses that applies to all situations (Glick *et al.* 2011, p. 3). We use our expert judgment and appropriate analytical approaches to weigh relevant information, including uncertainty, in our consideration of various aspects of climate change.

Although many species already listed as endangered or threatened may be particularly vulnerable to negative effects related to changes in climate, we also recognize that, for some listed species, the likely effects may be positive or neutral. In any case, the identification of effective recovery strategies and actions for recovery plans, as well as assessment of their results in 5-year reviews or proposed reclassification rules such as this document, should include consideration of climate-related changes and interactions of climate and other variables. In the case of this proposed rule, this analysis contributes to our evaluation of whether the island night lizard can be delisted.

Global climate projections are informative, and, in some cases, the only or the best scientific information available for us to use. However, projected changes in climate and related impacts can vary substantially across and within different regions of the world (e.g., IPCC 2007, pp. 8–12). Therefore, we use "downscaled" projections when they are available and have been developed through appropriate scientific procedures, because such projections provide higher resolution information that is more relevant to spatial scales used for analyses of a given species (see Glick *et al*. 2011, pp. 58–61, for a discussion of downscaling). With regard to our analysis for the island night lizard, we have used the best scientific and commercial data available as the basis for considering various aspects of climate change, as well as the likely effects of climate change in conjunction with other influences that are relevant to the island night lizard.

Since listing (42 FR 40682, p. 40684), potential threats have been identified to the flora and fauna of the United States from ongoing accelerated climate change (IPCC 2007, pp. 1–52; Point Reyes Bird Observatory (PRBO) 2011, pp. 1–68). A recent study examined the effects of climate change scenarios as they pertain specifically to the different ecoregions of California (PRBO 2011, pp. 1–68). An ecoregional approach was examined because climate change effects will vary in different areas of California due to the State's size and diverse topography (PRBO 2011, p. 1). Climate projections for temperature, precipitation, and sea-level rise in these ecoregions were obtained by analyzing numerous IPCC emission scenarios (2007, pp. 44–54), the core of most climate projections for atmospheric and oceanic global circulation models (PRBO 2011, p. 1).

The Southern Bight ecoregion includes San Clemente, San Nicolas, Santa Barbara, and Sutil Islands (PRBO 2011, p. 4); however, this ecoregion refers only to the marine environment and not the terrestrial environment occupied by island night lizards. Therefore, this threats analysis will use projections made for the Southwestern California ecoregion. This ecoregion is appropriate to use because it contains the same vegetation found on the islands and used by island night lizard, including *Lycium californicum*, *Opuntia* spp., *Coreopsis gigantea*, *Deinandra clementina*, *Artemisia californica*, and *Baccharis pilularis* (Sawyer *et al.* 2009, pp. 387, 423, 483, 493, 588, 599–600).

Currently, San Clemente, San Nicolas, Santa Barbara, and Sutil Islands are located within a Mediterranean climatic regime, but with a significant maritime influence. Climate change models indicate a 1 to 3 degrees Celsius (1.8 to 5.4 degrees Fahrenheit) increase in average temperature for southern California by the year 2070 (Field *et al.* 1999, p. 5; Cayan *et al.* 2008a, p. S26; PRBO 2011, p. 40). As daily temperatures increase, lizard species spend more time in burrows or refuges and less time foraging (Sinervo *et al.* 2010, p. 894). Over the same time span, models predict a 10 to 37 percent decrease in annual precipitation (PRBO 2011, p. 40); however, other modeling predictions indicate little to no change in annual precipitation (Field *et al.* 1999, pp. 8–9; Cayan *et al.* 2008a, p. S26; PRBO 2011, p. 40). If annual precipitation decreases, the percent of vegetative cover and amount of available food sources for the island night lizard would also decrease.

Although the islands experience a short rain season (generally November through April), the presence of fog during the summer months helps to reduce moisture stress for many plant species on the islands (Halvorson *et al.* 1988, p. 111). Currently, climate modeling for fog projections remains a subject of uncertainty (Field *et al.* 1999, pp. 21–22). There is also substantial uncertainty in precipitation projections and debate about precipitation patterns and projections for the Southwestern California ecoregion (PRBO 2011, p. 40). If the islands experienced a prolonged period of warmer air temperature and lower rainfall, the island night lizard's habitat could potentially be reduced; however, due to the uncertainty about precipitation projections, it is difficult to predict the likelihood of that happening.

Rising sea level may also pose a threat to island night lizard habitat on the inhabited islands. By the end of the twenty-first century, various models predict sea level rise 0.11 to 0.72 meters (0.11 to 0.72 ft) globally (Cayan *et al.* 2008b, S62; PRBO 2011, p. 41). A rise in sea level, which may accompany high-tide wave action and more frequent severe storms as a result of climate change, can potentially affect the islands that support the island night lizard by inundating low-lying portions, as well as potentially accelerating erosion along coastal areas (PRBO 2011, p. 41). The cobble and driftwood habitat that occurs just above the intertidal zone at Redeye Beach on San Nicolas Island and supports approximately 1,000 island night lizards (Fellers *et al.* 1998, p. 46) could potentially be altered by a rise in sea level. Island night lizard habitat on Santa Barbara

Island occurs at sea level and a rise could potentially alter this habitat (Fellers 2011, pers. obs.); however, the USGS's Coastal Vulnerability Index for the Channel Islands National Park indicates Santa Barbara Island has a low vulnerability ranking indicating a very low rate of sea level rise (0.002–0.004 m (0.007–0.013 ft) over the last 27 years (Pendleton *et al.* 2005, p. 28). On San Clemente Island, Mautz (2011 pers. comm.) indicates that high-quality island night lizard habitat at its lowest elevation occurrence is approximately 10 m (32.8 ft) above sea level, and that a rise in sea level, even at an extreme projection of 0.72 m (2.4 ft), does not pose a threat to the continued existence of the species.

The island night lizard is an insular endemic species (unique to specific islands) that is vulnerable to extirpation from random factors such as environmental stochasticity and natural catastrophes. While climate change could potentially affect the island night lizard and its habitat, the best available information does not allow us to make a meaningful prediction about how potential changes in temperature, precipitation patterns, and rising sea levels could impact the island night lizard, the islands where it occurs, or its habitat. However, we expect that the lizard's susceptibility to climate change is somewhat reduced by its ability to use varying habitat types and by its broad generalist diet. Therefore, we do not consider climate change to be a substantial threat to the island night lizard or its habitat at this time or in the future.

Factor A Summary

The loss and modification of habitat for the island night lizard by nonnative herbivores was identified as a threat to the species when it was listed (42 FR 40682). In our 2006 and 2012 island night lizard 5-year reviews we noted that, although grazing animals were removed from the islands, the residual effects remain and so the process for recovery of these habitat types on San Nicolas and Santa Barbara Islands is occurring at a slow pace. However, current evidence indicates that native vegetation, including that favored by the lizard, is recovering on all three occupied islands and is expected to continue due to management practices, restoration efforts, and policies implemented by the Navy and NPS. Therefore, habitat destruction and modification to the island night lizard or its habitat as a result of the introduction of nonnative herbivores has been ameliorated and is no longer a substantial threat nor is it likely to become one in the future.

At the time of listing (42 FR 40682), the introduction of nonnative plants was not identified as a threat to the island night lizard. The 2006 and 2012 5-year reviews considered the presence of nonnative plants a potential concern due to the vegetation composition changes that have occurred on the three islands inhabited by the island night lizard. The Navy and NPS recognize the potential threat of nonnative species and are implementing management efforts to reduce this risk that will continue in the future. While nonnative plants are a potential rangewide threat, we do not consider the introduction and persistence of nonnative plants to be a substantial threat to the island night lizard or its habitat on any of the occupied islands because of the current and

ongoing management actions and policies to remove and control the future introduction of nonnative plants to all islands.

Development activities can reduce available habitat for island night lizards, resulting in the direct loss of individuals. We have determined that land use impacts on San Clemente could potentially affect the island night lizard and its habitat. However, because of the limited development impacts, the remaining amount of available habitat, and the large number of island night lizards (estimated 21 million), we do not consider land use or development a substantial threat to the species' habitat on that island. Land use impacts on San Nicolas Island could potentially affect the island night lizard due to the limited amount of suitable habitat for the species; however, these activities will likely have a minimal impact due to the current management practices to avoid the species during project implementation. In addition, high-quality habitat is distributed in areas that will not be developed. The current status of Santa Barbara Island as a unit of the National Park System protects the island night lizard and its habitat from impacts related to future land use or development. In summary, while land use and development is a concern on two of the islands, the amount, quality, and distribution of habitat together with avoidance measures reduce the potential impact; therefore, we do not consider development a substantial threat to the island night lizard or its habitat on any of the occupied islands now or in the future.

A potential for fire exists on all three islands due to human activity, with an increased potential on San Clemente and San Nicolas Islands due to military activities and nonnative annual grasses that increase the amount of flammable fuels (Service 2006, pp. 13–15; Service 2012a, pp. 23–26). Based on historical records and current land use, high fire frequency on Santa Barbara is an unlikely occurrence, limited to human negligence to provide an ignition source. Although fire is a potential threat on all islands, we do not consider fire a substantial threat to the island night lizard or its habitat because of ongoing fire management policies, plans, and actions being implemented on all occupied islands now and in the future.

Historical land use and overgrazing by nonnative herbivores exacerbated the impacts of erosion on San Clemente, San Nicolas, and Santa Barbara Islands and those impacts are likely to continue for many years to come. However, all nonnative herbivores have been removed from the islands, and the slow process of natural recovery is ongoing. In accordance with the Navy's INRMPs and NPS's management policies, efforts are underway to control new and existing sources of erosion on all occupied islands. Further, the development and implementation of erosion control plans will help minimize future impacts to the island night lizard and its habitat from erosion. We conclude that erosion may affect island night lizard and its habitat, but it is not currently a substantial threat nor is it likely to become one in the future, due to current management, individual island circumstances, and erosion control efforts.

At the time of listing (42 FR 40682, p. 40684), we did not find climate change to be a threat to the island night lizard. Generally, climate change is predicted to result in warmer air temperatures, lower rainfall amounts, and rising sea levels; however, it is currently unknown how climate change will specifically affect island night lizard habitat on San Clemente, San Nicolas, and Santa Barbara Islands (Service 2006, p. 24; Service 2012a, pp. 38–39). The island night lizard may be more susceptible to natural catastrophes on San Nicolas and Santa Barbara Island because of its restricted distribution on those islands. Its greater numbers and distribution on San Clemente Island may indicate the island night lizard is less susceptible to stochastic events on the island. We recognize that climate change has the potential to affect the island night lizard and its habitat; however, at this time, the best available scientific and commercial information does not indicate that climate change is a substantial threat to the species' habitat now or in the future.

In conclusion, we do not find that habitat destruction or modification from introduction of nonnative taxa, land use and development, fire, erosion, or climate change pose a substantial threat to the island night lizard or its habitat on San Clemente, San Nicolas, and Santa Barbara Islands currently or in the future.

*Factor B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes.*

Overutilization for commercial, recreational, scientific, or educational purposes was not identified as a threat to the island night lizard at listing (42 FR 40682, p. 40684). The 2006 and 2012 5-year reviews (Service 2006, p. 18; Service 2012a, p. 28) did not identify overutilization for commercial, recreational, scientific, or educational purposes as a threat to the island night lizard. To our knowledge, island night lizards are captured only for scientific purposes or for relocation efforts due to Navy projects in accordance with permitted activities covered by a section 10(a)(1)(A) permit under the Act. Currently, there are only two active section 10(a)(1)(A) permits issued by the Service for the island night lizard. Although research activities may result in impacts to some individuals (use of pitfall traps and toe-clipping), they do not constitute a significant threat to the species. Capture of island night lizards for commercial or other nonpermitted activities is unlikely to occur on San Clemente or San Nicolas Islands because access to these islands is strictly limited by the Department of Defense. No available information indicates that visitors to Santa Barbara Island are actively collecting island night lizards. Although it is possible that someone visiting or working on any of the islands could collect island night lizards, based on the best available information, there is no indication that such activities are occurring.

Based on the limited number of active section 10(a)(1)(A) permits and lack of evidence that collection is otherwise occurring, we find that overutilization for commercial, recreational, scientific, or educational purposes is not currently a threat and not likely to become a threat to the species on any of the occupied islands.

*Factor C. Disease or Predation.*

Disease

Disease was not identified as a threat to the island night lizard at listing (42 FR 40682, p. 40684), or in the 2006 or 2012 5-year reviews (Service 2006, p. 19; Service 2012a, p. 29). Currently, the best available information does not indicate that disease is a threat to the lizard or likely to be a threat in the future.

Predation

At the time of listing (42 FR 40682, p. 40684), we identified predation of island night lizards as a threat to the species due to the introduction of nonnative feral cats and pigs to San Clemente Island (42 FR 40682, p. 40683). The listing rule (42 FR 40682, p. 40684) also indicated that the introduction of the nonnative southern alligator lizard to San Nicolas Island might pose a threat to the island night lizard through depredation or increased competition (42 FR 40682, p. 40684). The listing rule does not discuss native predators to the island night lizard, such as San Clemente loggerhead shrike and other raptor species. Currently, each island has native predators, such as raptors, but currently available information does not indicate these predators are a substantial threat to the island night lizard.

*San Clemente Island*

Since listing, nonnative predators have been identified on San Clemente Island, including feral cats, black rats, and gopher snakes (*Pituophis catenifer*); however, only feral cats are known to prey upon island night lizards (Mautz 2001, p. 9). The 2006 and 2012 5-year reviews concluded that feral cats on San Clemente Island could threaten the island night lizard. However, we concluded that predation by feral cats was not a substantial threat due to predator management actions implemented through the Navy's INRMP and the large lizard population on the island. The Navy continues to control feral cats on San Clemente Island to benefit the San Clemente loggerhead shrike and San Clemente Island sage sparrow (*Amphispiza belli clementeae)*. These measures provide an ancillary benefit to the island night lizard (Service 2008, p. 59; Biteman *et al.* 2011, p. 22).

In 2006, we concluded that predation by black rats (*Rattus rattus*) and nonnative snakes could threaten island night lizards on San Clemente Island. Black rats are found throughout San Clemente Island, but the total population of black rats on the island is unknown. Despite an extensive review of the best scientific and commercial information available, the information does not indicate whether or how often black rats prey upon island night lizards. One gopher snake has been located on the island, but since its removal, no others have been reported.

Despite the continued presence of feral cats and black rats on the island, lizard numbers remain high. Additionally, the Navy currently implements a "no pet policy" to prevent the introductions of potential predators to native wildlife (Navy 2001, p. 3.119). Therefore, nonnative predators do not currently pose a substantial threat to the species on San Clemente Island due to the large population size of the island night lizard and current predator control measures being implemented on the island, which are expected to continue in the future (Mautz 2001a, p. 25; Service 2006, p. 19).

*San Nicolas Island*

The 2006 5-year review indicated that the introduction of two nonnative lizards (southern alligator lizard and side-blotched lizard) may impact island night lizards on San Nicolas Island (Service 2006, p. 20). Specifically, the southern alligator lizard may compete with or prey on island night lizards (Service 2006, p. 20). Fellers *et al.* (2009, pp. 18–19) noted that the ranges of both nonnative lizards have expanded on San Nicolas Island and that both the island night lizard and side-blotched lizard have similar distributions on the island. Fellers *et al.* (2009, p. 18) also noted that southern alligator lizards occur in different habitats than island night lizards and that there is no indication of negative impacts to the island night lizard.

Despite the presence of these two nonnative lizards, a review of the best available

information does not indicate that predation is occurring. No record exists of side-blotched lizards preying upon island night lizards. In addition, the southern alligator lizard generally occupies different habitats than the island night lizard. Therefore, we conclude that the southern alligator lizard and side-blotched lizard do not pose a substantial predatory threat to the island night lizard on San Nicolas Island (Service 2012a, p. 32).

In the 2006 5-year review, we concluded that feral cat predation threatened the island night lizard due to the small lizard population and the large feral cat population on San Nicolas Island (Service 2006, p. 20). In 2009, the Navy implemented a feral cat removal program to protect Federal or State listed species, including the island night lizard (Hanson and Bonham 2011, pp. 1–4). In addition, the MSRP prioritized removal of feral cats from San Nicolas Island to improve nesting success for the Brandt's cormorant (*Phalacrocorax penicillatus*) and western gull (*Larus occidentalis*) (MSRP 2005, pp. D3.1–D3.2). Several methods were utilized to detect and remove cats from the island, including the installation of camera traps to detect the location and presence of feral cats, the use of modified padded leg-hold live traps, and spotlight hunting (Hanson and Bonham 2011, pp. 2, 4–5). Since June 27, 2010, surveys have failed to locate any evidence of feral cats on San Nicolas Island (Hanson and Bonham 2011, p. 19). The Navy and MSRP announced the successful completion of this project in February 2012 (Little 2012a, pers. comm.). Based on these successful feral cat eradication efforts, we conclude that feral cats are no longer a threat to the island night lizard on San Nicolas

Island (Service 2012a, p. 30).

In 2011, the Navy completed a Biosecurity Plan for San Nicolas Island to protect the biodiversity of San Nicolas Island by preventing the transport and establishment of all nonnative vertebrate species (Navy 2011, p. 1). Through implementation of this plan, the Navy has established biosecurity measures for personnel, barge operations, airfield operations, and implemented monitoring to prevent the introduction of nonnative vertebrate species to San Nicolas Island (Navy 2011, pp. 7–19). All personnel must be trained in biosecurity protocols, report sightings and suspicions, display and distribute information signs and pamphlets, ensure biosecurity language is included in all contracts, and review biosecurity compliance (Navy 2011, p. 19). These measures will benefit the island night lizard by reducing the potential for nonnative vertebrate species to be introduced to San Nicolas Island, which could prey upon the island night lizard or outcompete it for natural resources.

Based on a review of the best available information, we conclude that predation is not currently a substantial threat to the island night lizard on San Nicolas Island nor is it likely to become one in the future because nonnative lizards on the island occur in different habitats and are not adversely impacting island night lizards; feral cats have been successfully eradicated; and the Navy implemented a Biosecurity Plan to prevent further introduction of nonnative predators to the island.

*Santa Barbara and Sutil Island*

The 2006 and 2012 5-year reviews of the island night lizard concluded that Santa Barbara Island does not support any nonnative predators, but does support populations of native predators of the island night lizard, including the burrowing owl (*Athene cunicularia*), American kestrel (*Falco sparverius*), and barn owl (*Tyto alba*) (Service 2006, p. 19; Service 2012a, p. 33). While natural predators may pose a threat to individual island night lizards (Service 2012a), they do not pose a substantial threat to the continued existence of the species on Santa Barbara Island due to the current number of lizards on the island, highly sedentary nature of the lizard, and tendency to remain under shelter such as dense vegetation or rock, which limits the exposure to aerial predators lizards (Service 2006, p. 19; Service 2012a, p. 33). To prevent future introductions of the possible predators to Santa Barbara Island, the NPS restricts bringing any animal onto the island (NPS 2012). Based on lack of nonnative predators, limited predation by natural predators, and NPS invasive species management, we conclude that predation is not a substantial threat on Santa Barbara Island, now or in the future.

Factor C Summary

At the time of listing (42 FR 40682, p. 40684), disease was not considered a threat to the island night lizard and predation by feral cats and alligator lizards was considered a threat, but their impacts were not fully understood. Since then, as described above with

respect to affected islands, we have identified predation by nonnative lizards, feral cats, and black rats as a threat to the species. We have no new information to indicate that disease is a threat to the island night lizard. Recent research indicates that neither the southern alligator lizard nor the more recently introduced nonnative side-blotched lizard negatively impact the island night lizard on San Nicolas Island. Additionally, in 2010, the Navy successfully completed a feral cat removal program on San Nicolas Island. The Navy has also implemented efforts to control black rats and feral cats on San Clemente Island as part of the recovery efforts for the San Clemente loggerhead shrike and San Clemente Island sage sparrow. Though black rats and feral cats may affect individual island night lizards, they do not currently pose a substantial threat to the species on San Clemente Island. No nonnative predators of the island night lizard exist on Santa Barbara Island and native predators on Santa Barbara Island do not currently pose a threat to the species existence. Also, both the Navy and NPS have policies in place to control the introduction of potential predators, and such efforts are expected to continue in the future. Therefore, we conclude that disease and predation are not substantial threats to the island night lizard on any of the occupied islands currently or in the future.

*Factor D. Inadequacy of Existing Regulatory Mechanisms.*

The Act requires us to examine the adequacy of existing regulatory mechanisms with respect to those existing and foreseeable threats that may affect island night lizard. The inadequacy of existing regulatory mechanisms was not indicated as a threat to the

island night lizard at the time of listing (42 FR 40682, p. 40684). Since it was listed as threatened, the Act has been and continues to be the primary Federal law that affords protection to island night lizard. The Service's responsibilities in administering the Act include sections 7, 9, and 10.

Section 7(a)(1) of the Act requires all Federal agencies to utilize their authorities in furtherance of the purposes of the Act by carrying out programs for the conservation of endangered and threatened species. Section 7(a)(2) of the Act requires Federal agencies to ensure that actions they fund, authorize, or carry out do not "jeopardize" the continued existence of a listed species or result in the destruction or adverse modification of habitat in areas designated by the Service to be critical. Critical habitat has not been designated or proposed for the lizard. A jeopardy determination is made for a project that is reasonably expected, either directly or indirectly, to appreciably reduce the likelihood of both the survival and recovery of a listed species in the wild by reducing its reproduction, numbers, or distribution (50 CFR 402.02). A non-jeopardy opinion may include reasonable and prudent measures that minimize the extent of impacts to listed species associated with a project.

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the "take" of federally listed wildlife. Section 3(18) defines "take" to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Service regulations (50 CFR 17.3) define "harm" to

include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harassment" is defined by the Service as an intentional or negligent action that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species.

Listing the island night lizard provided a variety of protections within areas under Federal jurisdiction and the conservation mandates of section 7 for all Federal agencies. Since it was first listed in 1977, the Navy and NPS have consulted and coordinated with us regarding the effects of various activities occurring on federally owned San Clemente, San Nicolas, and Santa Barbara Islands (see *Factor A: Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range* above). If the island night lizard were not listed, these protections would not be provided. Thus, we must evaluate whether other regulatory mechanisms would provide adequate protections absent the protections of the Act.

*National Environmental Policy Act (NEPA):*

All Federal agencies must comply with the NEPA of 1970 (42 U.S.C. 4321 *et seq.*) for projects they fund, authorize, or carryout. The Council on Environmental

Quality's regulations for implementing NEPA (40 CFR parts 1500–1518) state that agencies shall include a discussion on the environmental impacts of the various project alternatives (including the proposed action), any adverse environmental effects that cannot be avoided, and any irreversible or irretrievable commitments of resources involved (40 CFR part 1502). NEPA does not regulate activities that might affect the island night lizard, but does require full evaluation and disclosure of information regarding the effects of contemplated Federal actions on sensitive species and their habitats. It also does not require minimization or mitigation measures by the Federal agency involved. Therefore, Federal agencies may include conservation measures for island night lizard as a result of the NEPA process, but such measures would be voluntary in nature and are not required by the statute. On San Clemente and San Nicolas Islands, the Navy must analyze under NEPA any actions significantly affecting the quality of the human environment. Typically, the Navy prepares Environmental Assessments and Environmental Impact Statements on operation plans and new or expanding training actions. On Santa Barbara Island and incorporated Sutil Island, NPS must analyze under NEPA any actions significantly affecting the quality of the human environment. NPS prepares Environmental Assessments and Environmental Impact Statements on actions and projects in national parks. Absent the listing of island night lizard, we would expect the Navy and NPS to continue to meet the procedural requirements of NEPA for their actions. However, as explained above, NEPA does not itself regulate activities that might affect island night lizards or their habitat.

*National Park Service (NPS) Organic Act:*

The NPS Organic Act of 1916, as amended (39 Stat. 535, 16 U.S.C. 1), states that the NPS "shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations…to conserve the scenery and the national and historic objects and the wildlife therein" (which includes listed or non-listed species), "and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The 2006 NPS Management Policies indicate that the Park Service will "meet its obligations under the NPS Organic Act and the Endangered Species Act to both pro-actively conserve listed species and prevent detrimental effects on these species." This includes working with the Service and undertaking active management programs to inventory, monitor, restore, and maintain listed and non-listed species habitats, among other actions.

*Sikes Act Improvement Act (Sikes Act):*

The Sikes Act (16 U.S.C. 670) authorizes the Secretary of Defense to develop cooperative plans with the Secretaries of Agriculture and the Interior for natural resources on public lands. The Sikes Act Improvement Act of 1997 requires Department of Defense installations to prepare Integrated Natural Resources Management Plans that provide for the conservation and rehabilitation of natural resources on military lands consistent with the use of military installations to ensure the readiness of the Armed

Forces. INRMPs incorporate, to the maximum extent practicable, ecosystem management principles and provide the landscape necessary to sustain military land uses. INRMPs are developed in coordination with the State and the Service, and are generally updated every 5 years. Although an INRMP is technically not a regulatory mechanism, because its implementation is subject to funding availability, it is an important guiding document that helps to integrate natural resource protection with military readiness and training.

**San Clemente Island INRMP:** Pursuant to the Sikes Act, the Navy adopted an INRMP for San Clemente Island with multiple objectives for protection of the island night lizard and its habitat that reduce threats to this taxon (Navy 2002). The INRMP complied with NEPA, the Act, the Federal Noxious Weed Act (7 U.S.C. 2801), and the Soil Conservation and Domestic Allotment Act (16 U.S.C 590 a, b). The goal of the San Clemente Island INRMP is to support the military requirements of the Pacific Fleet while maintaining long-term ecosystem health (Navy 2002, p. 1.2). Specifically, this INRMP will:

(1) Facilitate sustainable military readiness and foreclose no options for future requirements of the Pacific Fleet.

(2) Protect, maintain, and restore priority native species to reach self-sustaining levels.

(3) Ensure ecosystem resilience to testing and training impacts.

(4) Maintain the full suite of native species, emphasizing the endemics.

In 1997, the Navy established the INLMA (Service 1997, p. 5), an area encompassing 11,051 ac (4,474 ha) of the western shore of San Clemente Island where the majority of high-quality *Lycium californicum* and *Opuntia* spp. habitats, and approximately half of the island night lizard population is found (Mautz 2001a, p. 29). The INRMP states that the INLMA will be managed as a demonstration project, focusing on the integration of military operational needs with conservation of species (Navy 2002, p. 4.43). The INRMP provides a benefit to the species (Navy 2002, pp. 4.43–4.47) through the following measures:

(1) Designate and implement an approximately 11,010 acre (4,457 ha) management area.

(2) Establish a "no net loss" habitat condition policy for INLMA.

(3) Survey for nonnative weeds and prioritize annual control programs for the INLMA.

(4) Ensure that no new nonnative animals are introduced to San Clemente Island that could be a predator, competitor, or introduce disease to the island night lizard.

(5) Provide aggressive control of existing nonnative animals in the INLMA.

(6) Manage fire to protect the integrity of the management area for island night lizards.

(7) Develop, in cooperation with the Service, a delisting plan for the island

night lizard.

In addition to these management measures, the Navy developed an FMP for San Clemente Island in 2009 (see *Factor A*). The FMP implements fuel management strategies that benefit the island night lizard through development of: high-intensity fuel management buffer zones; defensible space around structures; and low-intensity landscape modification with prescribed fire that meets fuels management, resource protection, and habitat restoration objectives (Navy 2009, p. ES-3). Additionally, we concluded that the fuelbreak and suppression measures outlined within the FMP would prevent a significant increase in fire frequency where high-quality habitat occurs (Service 2008, p. 204).

Although the INRMP includes objectives targeted toward habitat protection of high-quality island night lizard habitat, Navy operational needs may supersede INRMP goals. The Navy is currently revising the 2002 INRMP, and future iterations of this plan may differ from the existing INRMP. Pending completion of the new INRMP, the Navy continues to implement the 2002 INRMP. We expect that the revised INRMP will continue to manage for natural resource conservation to the maximum extent practicable based on the Navy's historical commitment to implement beneficial management actions for native flora and fauna, and their continued cooperation with the Service to provide conservation actions that benefit species such as the island night lizard and its habitat.

**San Nicolas Island INRMP:** Pursuant to the Sikes Act, the Navy adopted an INRMP for San Nicolas Island that includes measures to protect the island night lizard and its habitat (Navy 2010). The INRMP also complied with NEPA, the Act, the Federal Noxious Weed Act (7 U.S.C. 2801), and the Soil Conservation Act. The purpose of the San Nicolas INRMP is to provide a viable and implementable framework for the management of natural resources at Naval Base Ventura County, California, San Nicolas Island (Navy 2010, p. 1.1). The INRMP's objective for island night lizards on San Nicolas Island is to maintain a viable population (Navy 2010, p. 4.56). The strategies to accomplish this objective from the INRMP are listed below (Navy 2010, p. 4.56):

(1) Continue to develop and implement protocols to resolve any baseline biological data gaps and to monitor distribution, population size, population trends, and habitat usage of the island night lizard population by conducting site-specific surveys in known or suitable habitat prior to disturbance activities.

(2) Protect and maintain island night lizard habitat quality and integrity by:

(a) Conducting an invasive nonnative control, monitoring, and removal program in island night lizard habitat in order to reduce impacts upon the species' population.

(b) Defining and clearly marking work areas during road maintenance and other activities to prevent island night lizard mortality in accordance with the terms and conditions listed in the Biological Opinion (Service 2001).

(c) Excluding areas of high-quality island night lizard habitat from mowing regimes.

(d) Maintaining a bare ground buffer zone around equipment and storage areas in high-quality island night lizard habitat where practicable.

(e) Siting staging areas for storage of equipment and materials in areas with low island night lizard densities, whenever feasible.

(3) Conduct relocation of island night lizards in accordance with the terms and conditions identified in the current Biological Opinion (Service 2001).

(4) Support studies to investigate the effectiveness of island night lizard management strategies by:

(a) Supporting scientific studies of competition relationships between alligator lizards and island night lizards.

(b) Supporting genetic studies of isolated island night lizard populations to determine population structure and size.

(5) Educate island personnel on laws covering prohibition on taking listed species for pets or for sale in pet trade.

(6) Support recovery plan efforts to establish stable island night lizard populations and eventual delisting by:

(a) Supporting Channel Islands-wide review of population status of the species.

While the INRMP does not guarantee funding will be appropriated for implementation, the Navy has demonstrated a continued commitment to the goals of the INRMP. They have funded a full-time biologist for the island, provided additional funds

to hire contractors, or utilized university, volunteer, or other agency personnel to implement numerous activities as outlined in the INRMP.

*Federal Noxious Weed Act*

The Federal Noxious Weed Act of 1975 (88 Stat. 2148, 7 U.S.C. 2801) established a Federal program that has subsequently been largely superseded by other statutes, including the Plant Protection Act (7 U.S.C. 7701, et seq.), to control the spread of noxious weeds. The 1990 amendment to the the Federal Noxious Weed Act (7 U.S.C. 2814), has been retained, and requires each Federal land-managing agency to: designate an office or person adequately trained in managing undesirable plant species to develop and coordinate a program to control such plants on the agency's land; establish and adequately fund this plant management program through the agency's budget process; complete and implement cooperative agreements with the States regarding undesirable plants on agency land; and establish integrated management systems (as defined in the section) to control or contain undesirable plants targeted under the cooperative agreements. In accordance with this direction, the Navy and NPS work to control the introduction of nonnative plant species to the islands and to control or remove those currently present, which are actions that assist in protecting island night lizard habitat.

*Soil Conservation and Domestic Allotment Act*

The Soil Conservation and Domestic Allotment Act of 1935 (16 U.S.C. 590(a, b), 49 Stat. 163) recognized that the wastage of soil and moisture resources on farm, grazing, and forest lands of the Nation, resulting from soil erosion, is a menace to the national welfare and declared it to be the policy of Congress to provide permanently for the control and prevention of soil erosion and thereby to preserve natural resources, control floods, prevent impairment of reservoirs, and maintain the navigability of rivers and harbors, protect public health, public lands and relieve unemployment, and the Secretary of Agriculture shall coordinate and direct all activities with relation to soil erosion. In order to effectuate this policy, the Secretary of Agriculture authorizes, from time to time, that the following actions may be performed on lands owned or controlled by the United States or any of its agencies, with the cooperation of the agency having jurisdiction: conduct surveys, investigations, and research relating to the character of soil erosion and the preventive measures needed; to publish the results of any such surveys, investigations, or research; to disseminate information concerning such methods; and to conduct demonstrational projects in areas subject to erosion by wind or water; and carry out preventative measures, including, but not limited to, engineering operations, methods of cultivation, the growing of vegetation, and changes in use of land. These measures assist island night lizards by encouraging management actions that prevent and control erosion, thus protecting island night lizard habitat.

Factor D Summary

The inadequacy of existing regulatory mechanisms was not indicated as a threat to the island night lizard at the time of listing or in the recent status reviews. Because all islands are under Federal ownership, various laws, regulations, and policies administered by the Federal Government provide protective mechanisms for the species and its habitat. Primary Federal laws that provide some benefit for the species and its habitat absent the Act include NEPA, Sikes Act, Federal Noxious Weed Act, Soil Conservation and Domestic Allotment Act, and NPS Organic Act.

INRMPs are important guiding documents that help to integrate the military's mission with natural resource protection on San Clemente and San Nicolas Island. Although the INRMPs include objectives targeted toward protection of habitat essential to the island night lizard and other native species, Navy operational needs may diverge from INRMP natural resource goals. For example, some control measures may not be implemented effectively or consistently in those areas that are operationally closed due to the presence of unexploded ordnance. However, in most locations, fire management plans, erosion control in accordance with the Soil Conservation and Domestic Allotment Act, and nonnative plant species control in accordance with the Federal Noxious Weed Act, afford protections to the island night lizard on the islands as discussed above under *Factor A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range*. Absent listing under the Act, the Navy would still be required to develop and implement INRMPs under the Sikes Act. The INRMPs will continue to

provide a conservation benefit to the island night lizard through native habitat management efforts, where there is overlap with island night lizard habitat.

The population of island night lizards and their habitat on Santa Barbara Island and Sutil Island are afforded protections by the NPS's Organic Act, which provides management programs to inventory, monitor, restore, and maintain listed species' habitats, and requires the NPS to manage all natural resources regardless of listing status (such as island night lizard after it is delisted).

Delisting the island night lizard would eliminate the requirement to consult with us for actions carried out, funded, or authorized by the Navy and NPS on San Clemente, San Nicolas, and Santa Barbara Islands. However, we anticipate the Navy will continue to implement INRMPs for both San Clemente and San Nicolas Islands that include management for natural resources, native species, and other listed species, which we anticipate will provide an ancillary benefit to the island night lizard. We have no information indicating that management of Santa Barbara Island would be changed or altered in a manner that would be inconsistent with the conservation of natural resources and native species, which includes the island night lizard and its habitat. In conclusion, island night lizards are afforded protection through Federal or military mechanisms and, in absence of the Act, these existing regulatory mechanisms are expected to continue to a degree adequate to conserve the island night lizard and its habitat throughout its range both now and in the future. Therefore, we conclude that the inadequacy of existing

regulatory mechanisms is not a current threat to the species on any of the occupied islands, nor is it expected to become a threat in the future.

*Factor E. Other Natural or Manmade Factors Affecting the Continued Existence of the Species.*

The listing rule (42 FR 40682, p. 40684) states that island-adapted taxa are often detrimentally affected by accidental or intentional introduction of nonnative species. This was the only threat attributed to Factor E for any of the seven taxa included in that rule. Because the primary effect of most nonnative taxa was related to habitat or predation, the discussion of introduced nonnative taxa is now included under Factor A as it relates to habitat and Factor C as it relates to predation.

The restricted distribution of the island night lizard on San Nicolas and Santa Barbara Islands makes these populations susceptible to natural catastrophes such as fires, landslides, or prolonged droughts (Service 2006, p. 24). Potential impacts and management efforts to reduce or control effects of fire and erosion are discussed under Factor A. The 2012 5-year review of the island night lizard discusses the potential threat of climate change and its effects on precipitation, drought, and sea level rise as it relates to the island night lizard (Service 2012a, pp. 39–41), and is further discussed below.

Climate Change

As discussed under Factor A—Climate Change above, climate change poses a potential impact to island night lizards and their habitat based on modeling and climate change projections for southern California from various sources (IPCC 2007, PRBO 2011). Because the best available information for the region that encompasses San Clemente, San Nicolas, Santa Barbara, and Sutil Islands refers only to the marine environment and not the terrestrial environment occupied by island night lizards (PRBO 2011, p.4), we are utilizing projections made for the Southwestern California ecoregion in this threat analysis (see *Factor A*—Climate Change section above for additional discussion on available data, climate model predictions for temperature and precipitation, and potential impacts related to island night lizard habitat).

Currently, climate modeling projections for fog (Field *et al.* 1999, pp. 21–22) and precipitation are the subject of uncertainty, with relatively little consensus concerning projections for the Southwestern California ecoregion (PRBO 2011, p. 40). Additionally and as noted above, we have no specific information related to precipitation and temperature projections specific to the terrestrial environment of the California Channel Islands. Regardless, the best available data indicate that when daily temperatures increase, lizard species spend more time in burrows or refuges and less time foraging (Sinervo *et al.* 2010, p. 894). This reduced foraging time could possibly impact growth and survival of this already highly sedentary lizard. Drought conditions also reduce the arthropod populations in the spring, reducing a food source and compounding the effects

of climate change (Knowlton 1949, p. 45; Schwenkmeyer 1949, pp. 37–40; Bolger *et al*. 2000, p. 1242). Therefore, in the event of a prolonged period of warmer air temperature and lower rainfall, the island night lizard's habitat and food supply could also potentially be reduced. However, even with this potential reduction in food availability, Sinervo *et al.* (2010, p. 898) investigated climate change impacts on Xantusidae and predicted that the species extinction risk for this family is zero through 2080. Therefore, we do not consider climate change to be a substantial threat to the island night lizard now or in the future.

Factor E Summary

At the time of listing (42 FR 40682, p. 40684), we did not identify climate change as a threat to the island night lizard. The 2006 and 2012 5-year reviews (Service 2006 p. 24; Service pp. 38–39) suggested that, because the island night lizard is an insular endemic species, it is vulnerable to extirpation from random factors such as environmental stochasticity (lacking predictability) and natural catastrophes. However, it is currently unknown how climate change will affect the island night lizard and its habitat on San Clemente, San Nicolas, and Santa Barbara Islands (Service 2006, p. 24; Service 2012a, pp. 38–39). The island night lizard may be more susceptible to natural catastrophes on San Nicolas and Santa Barbara Island because of its restricted distribution on those islands. Its greater numbers and distribution on San Clemente Island may indicate the island night lizard is less susceptible to stochastic events on that

island. Climate change may affect the island night lizard and its habitat, but the best available information does not allow us to make accurate predictions regarding the effects of climate change on the island night lizard at this time. We expect that the lizard's susceptibility to climate change is somewhat reduced by its ability to use varying habitat types and by its broad generalist diet. Continued improvement in habitat quality and reduction of threats by the Navy and NPS is likely to increase the resilience of the lizard and its habitat to changing conditions. Therefore, because of current and expected ongoing management, we do not consider climate change to be a substantial threat to the species at this time or in the future.

*Cumulative Effects*

A species may be affected by a combination of threats. Within the preceding review of the five listing factors, we identified multiple threats that may have interrelated impacts on the island night lizard or its habitat. Fire (*Factor A)* may increase in intensity and frequency on all occupied islands if there is an abundance of nonnative plants (grasses) (*Factor A*). Similarly, across all islands occupied by the island night lizard, fire (*Factor A*) may become more frequent if climate change results in hotter and drier environmental conditions (*Factor A and E*). An increase in the frequency of fires (*Factor A*) may potentially lead to an increased risk of predation (*Factor C*) due to loss of vegetative cover for the island night lizard in burned areas. On San Clemente and San Nicolas Islands, the land use and development activities (*Factor A*) conducted by the

Navy can prompt an increase in erosion (*Factor A*) and the potential for fire (*Factor A*) in island night lizard habitat. Additionally, effects from climate change, such as rising sea level in conjunction with increased storm frequency and high-tide wave action (*Factor A*), could potentially impact island night lizard habitat by accelerating erosion (*Factor A*) on all occupied islands. Although island night lizard productivity may be reduced because of these threats, either alone or in combination, it is not easy to determine whether a specific threat is the primary threat having the greatest impact on the viability of the species, or whether it is exacerbated by, or functioning in combination with, other threats to result in cumulative or synergistic effects on the species. The Navy and NPS are actively managing for the threats described above to minimize impacts to the island night lizard. It is anticipated that their continued management of these threats will maintain the threats at a level where synergistic effects are not likely to result in a substantial impact to the island night lizard or its habitat. Therefore, we do not consider the cumulative impact of these threats to be substantial at this time.

**Finding**

An assessment of the need for a species' protection under the Act is based on threats to that species and the regulatory mechanisms in place to ameliorate impacts from these threats. As required by the Act, we conducted a review of the status of the taxon and assessed the five factors to determine whether the island night lizard is threatened or endangered throughout all of its range. We examined the best scientific and commercial

information available regarding the past, present, and future threats faced by the lizard. We reviewed petitions received on May 1, 1997, and March 22, 2004; comments and information received after publication of our 90-day finding (71 FR 48900, August 22, 2006); two 5-year status reviews, information available in our files; and other available published and unpublished information. We also consulted with recognized experts on the island night lizard and its habitat, and with other Federal agencies.

In considering which factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds in a way that causes actual impacts to the species. If there is exposure to a factor, but no response or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a substantial threat and we then attempt to determine the significance of the threat. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species warrants listing as endangered or threatened, as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could potentially impact a species negatively is not sufficient to compel a finding that listing is appropriate; we require evidence that these factors are operative substantial threats that act on the species to the point that the species meets the definition of threatened or endangered under the Act.

The reasons for listing the island night lizard as threatened (42 FR 40682) were: Habitat loss or modification through the introduction of nonnative herbivores such as feral goats and pigs on San Clemente Island; habitat modification through the introduction of nonnative plants throughout the species' range (San Clemente, San Nicolas, and Santa Barbara Islands); predation by feral cats on San Clemente Island; and competition with the southern alligator lizard on San Nicolas Island. The island night lizard was not known to occupy Sutil Island at listing and thus the island was not included in the threats analysis at the time of listing. Since listing, the island night lizard has been twice identified on Sutil Island. Due to the small size of Sutil Island, proximity to Santa Barbara Island, and ownership of Sutil and Santa Barbara Island by the NPS, we included the population of Sutil Island and discussion of threats with the population of Santa Barbara Island.

At the time of listing, several threats related to destruction of habitat were identified for the island night lizard on one or more of the Channel Islands. Since listing, these threats have been addressed by multiple actions through implementation of the Navy's INRMPs and the NPS's management policies. While a variety of threats existed under Factor A, not all threats were present on all three islands.

All nonnative herbivores have been removed from San Clemente, San Nicolas, and Santa Barbara Islands, and the slow process of natural recovery of native habitat is ongoing. Management actions to control, remove, or prevent introduction of nonnative

plant species are also implemented on all three islands by the Navy and NPS. Current management efforts on San Clemente and San Nicolas Islands to avoid or minimize impacts from land use and development, fire, and erosion due to military activities have resulted in reduction of threats to the island night lizard or its habitat on those islands. Land use and development is not considered a threat to the lizard or its habitat on Santa Barbara Island. Fire is also not a substantial threat to the lizard or its habitat on Santa Barbara Island due to limited human presence, current fire management policy on the island, and an FMP for Channel Islands National Park (including Santa Barbara Island). Erosion resulting from historical grazing by nonnative herbivores and historical land use practices is exacerbated by current military activities. Efforts to control these sources of erosion on San Clemente and San Nicolas Islands are currently ongoing, as outlined in the Navy's INRMPs. As a result of management efforts by the Navy and NPS, we do not consider any of these habitat threats to be substantial to the island night lizard or its habitat on any of the occupied islands, nor do we expect them to become so in the foreseeable future.

Disease is not a current threat for the island night lizard on any of the islands where it occurs nor do we anticipate it to be in the foreseeable future; however, predation has impacted the species in the past and continues to be a potential impact to individuals on San Clemente Island. We do not consider predation to be a substantial threat currently or in the foreseeable future due to ongoing feral cat removal efforts implemented through the Navy's INRMP. All feral cats have been removed from San Nicolas Island, and

predation is not a threat to the lizard on Santa Barbara Island. Finally, research indicates that the southern alligator lizard is not a threat to the island night lizard on San Nicolas Island.

The overutilization for commercial, recreational, scientific, or educational purposes and inadequacy of regulatory mechanisms are not threats to the island night lizard on any of the occupied islands, nor do we anticipate them to become threats in the foreseeable future.

Climate change has been identified as a potential threat with regards to the present or threatened destruction, modification, or curtailments of its habitat, as well as with regard to other human and manmade factors. However, we cannot precisely determine how climate change will potentially impact the island night lizard and its habitat on San Clemente, San Nicolas, and Santa Barbara Islands. While climate change may impact the lizard and its habitat, we are unable to accurately predict the effects to the species and its habitat. However, species biology indicates that the lizard may be able to withstand some changes in habitat conditions. Therefore, we do not consider climate change to be a substantial threat to the species throughout its range now or in the foreseeable future.

At the time of listing, the number of island night lizards on San Clemente, San Nicolas, and Santa Barbara Islands was unknown. Research conducted since then indicates that approximately 21 million island night lizards occur on San Clemente

Island, 15,300 lizards occur on San Nicolas Island, and 17,600 lizards occur on Santa Barbara Island. While no new population numbers are available, new habitat assessments indicate that the amount of quality habitat supporting the island night lizard has increased on each of the islands. It is likely that the number of lizards has increased in association with the increase of quality habitat on all three islands. Currently, the Navy conducts monitoring for management actions that impact threatened or endangered species, including the island night lizard, as required by its INRMP. If the island night lizard is removed from the List, the Navy would continue to monitor the lizard and its habitat through post-delisting monitoring efforts to ensure the species is recovering and does not warrant relisting in the foreseeable future. The NPS conducts monitoring on Santa Barbara Island to assess the impacts of management actions on threatened and endangered species, including the island night lizard and its habitat. Additionally, the NPS monitors all natural resources, including the island night lizard, and would also participate in post-delisting monitoring efforts to ensure the species does not warrant relisting in the foreseeable future.

We conclude that, since the time of listing, all substantial threats to the island night lizard have been ameliorated. Any remaining potential threats to the species are currently managed to minimize impacts. The one exception is climate change, for which there is not sufficient information to make accurate predictions about the timing and degree of potential impacts. However, data suggest that the extinction risk for the family Xantusidae (which includes the Island night lizard) is zero through the year 2080 (based

on Sinervo *et al.* (2010) evaluation of Xantusidae (see Climate Change section)). Therefore, using 2080 as our frame of reference for determining the foreseeable future (which is generally the latest time period that most climate change emission scenario models use because they lose confidence beyond this point), we concluded that this is not likely to become a substantial threat now or in the foreseeable future. We also note that all six primary objectives of the Recovery Plan were, or are in the process of, being fulfilled (see **Recovery Plan Implementation** section). Additionally, since listing, it was determined that over 21 million lizards exist in high-quality habitat among the three islands. Based on the current level of threats, we would not anticipate future declines in population numbers. Therefore, we conclude that the island night lizard is not likely to become endangered in the foreseeable future throughout all of its range, because all substantial threats have been ameliorated, potential threats are currently managed, and Recovery Plan objectives have been initiated or fulfilled. As such, we recommend removing the island night lizard from the List of Endangered and Threatened Wildlife.

**Significant Portion of Its Range**

The Act defines "endangered species" as any species which is "in danger of extinction throughout all or a significant portion of its range," and "threatened species" as any species which is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." The definition of "species" is also relevant to this discussion. The Act defines "species" as follows: "The term

'species' includes any subspecies of fish or wildlife or plants, and any distinct population segment [DPS] of any species of vertebrate fish or wildlife which interbreeds when mature." The phrase "significant portion of its range" (SPR) is not defined by the statute, and we have never addressed in our regulations: (1) The consequences of a determination that a species is either endangered or likely to become so throughout a significant portion of its range, but not throughout all of its range; or (2) what qualifies a portion of a range as "significant."

Two recent district court decisions have addressed whether the SPR language allows the Service to list or protect less than all members of a defined "species": *Defenders of Wildlife* v. *Salazar*, 729 F. Supp. 2d 1207 (D. Mont. 2010), concerning the Service's delisting of the Northern Rocky Mountain gray wolf (74 FR 15123, Apr. 12, 2009) and *WildEarth Guardians* v. *Salazar*, 2010 U.S. Dist. LEXIS 105253 (D. Ariz. Sept. 30, 2010), concerning the Service's 2008 finding on a petition to list the Gunnison's prairie dog (73 FR 6660, Feb. 5, 2008). The Service had asserted in both of these determinations that it had authority, in effect, under the Act to protect only some members of a "species," as defined by the Act (species, subspecies, or DPS). Both courts ruled that the determinations were arbitrary and capricious on the grounds that this approach violated the plain and unambiguous language of the Act. The courts concluded that reading the SPR language to allow protecting only a portion of a species' range is inconsistent with the Act's definition of "species." The courts concluded that once a determination is made that a species (species, subspecies, or DPS) meets the definition of

"endangered species" or "threatened species," it must be placed on the list in its entirety and the Act's protections applied consistently to all members of that species (subject to modification of protections through special rules under sections 4(d) and 10(j) of the Act).

Consistent with that interpretation, and for the purposes of this finding, we interpret the phrase "significant portion of its range" in the Act's definitions of "endangered species" and "threatened species" to provide an independent basis for listing; thus there are two situations (or factual bases) under which a species would qualify for listing: a species may be endangered or threatened throughout all of its range or a species may be endangered or threatened in only a significant portion of its range. If a species is in danger of extinction throughout an SPR, the species is an "endangered species." The same analysis applies to "threatened species." Based on this interpretation and supported by existing case law, the consequence of finding that a species is endangered or threatened in only a significant portion of its range is that the entire species shall be listed as endangered or threatened, respectively, and the Act's protections shall be applied across the species' entire range.

We conclude, for the purposes of this finding, that interpreting the SPR phrase as providing an independent basis for listing is the best interpretation of the Act because it is consistent with the purposes and the plain meaning of the key definitions of the Act; it does not conflict with established past agency practice, as no consistent, long-term

agency practice has been established; and it is consistent with the judicial opinions that have most closely examined this issue. Having concluded that the phrase "significant portion of its range" provides an independent basis for listing and protecting the entire species, we next turn to the meaning of "significant" to determine the threshold for when such an independent basis for listing exists.

Although there are potentially many ways to determine whether a portion of a species' range is "significant," we conclude, for the purposes of this finding, that the significance of the portion of the range should be determined based on its biological contribution to the conservation of the species. For this reason, we describe the threshold for "significant" in terms of an increase in the risk of extinction for the species. We conclude that a biologically based definition of "significant" best conforms to the purposes of the Act, is consistent with judicial interpretations, and best ensures species' conservation. Thus, for the purposes of this finding, and as explained further below, a portion of the range of a species is "significant" if its contribution to the viability of the species is so important that, without that portion, the species would be in danger of extinction.

We evaluate biological significance based on the principles of conservation biology using the concepts of redundancy, resiliency, and representation. *Resiliency* describes the characteristics of a species and its habitat that allow it to recover from periodic disturbance. *Redundancy* (having multiple populations distributed across the

landscape) may be needed to provide a margin of safety for the species to withstand catastrophic events. *Representation* (the range of variation found in a species) ensures that the species' adaptive capabilities are conserved. Redundancy, resiliency, and representation are not independent of each other, and some characteristic of a species or area may contribute to all three. For example, distribution across a wide variety of habitat types is an indicator of representation, but it may also indicate a broad geographic distribution contributing to redundancy (decreasing the chance that any one event affects the entire species) and the likelihood that some habitat types are less susceptible to certain threats, contributing to resiliency (the ability of the species to recover from disturbance). None of these concepts is intended to be mutually exclusive, and a portion of a species' range may be determined to be "significant" due to its contributions under any one or more of these concepts.

For the purposes of this finding, we determine if a portion's biological contribution is so important that the portion qualifies as "significant" by asking whether *without that portion* the representation, redundancy, or resiliency of the species would be so impaired that the species would have an increased vulnerability to threats to the point that the overall species would be in danger of extinction (would be "endangered"). Conversely, we would not consider the portion of the range at issue to be "significant" if there is sufficient resiliency, redundancy, and representation elsewhere in the species' range that the species would not be in danger of extinction throughout its range if the population in that portion of the range in question became extirpated (extinct locally).

We recognize that this definition of "significant" (a portion of the range of a species is "significant" if its contribution to the viability of the species is so important that without that portion the species would be in danger of extinction) establishes a threshold that is relatively high. On the one hand, given that the consequences of finding a species to be endangered or threatened in an SPR would be listing the species throughout its entire range, it is important to use a threshold for "significant" that is robust. It would not be meaningful or appropriate to establish a very low threshold whereby a portion of the range can be considered "significant" even if only a negligible increase in extinction risk would result from its loss. Because nearly any portion of a species' range can be said to contribute some increment to a species' viability, use of such a low threshold would require us to impose restrictions and expend conservation resources disproportionately to conservation benefit: listing would be rangewide, even if only a portion of the range of minor conservation importance to the species is imperiled. On the other hand, it would be inappropriate to establish a threshold for "significant" that is too high. This would be the case if the standard were, for example, that a portion of the range can be considered "significant" only if threats in that portion result in the entire species being currently endangered or threatened. Such a high bar would not give the SPR phrase independent meaning, as the Ninth Circuit held in *Defenders of Wildlife* v. *Norton*, 258 F.3d 1136 (9th Cir. 2001).

The definition of "significant" used in this finding carefully balances these concerns. By setting a relatively high threshold, we minimize the degree to which restrictions will be imposed or resources expended that do not contribute substantially to species conservation. But we have not set the threshold so high that the phrase "in a significant portion of its range" loses independent meaning. Specifically, we have not set the threshold as high as it was under the interpretation presented by the Service in the *Defenders* litigation. Under that interpretation, the portion of the range would have to be so important that current imperilment there would mean that the species would be *currently* imperiled everywhere. Under the definition of "significant" used in this finding, the portion of the range need not rise to such an exceptionally high level of biological significance. (We recognize that if the species is imperiled in a portion that rises to that level of biological significance, then we should conclude that the species is in fact imperiled throughout all of its range, and that we would not need to rely on the SPR language for such a listing.) Rather, under this interpretation we ask whether the species would be endangered everywhere without that portion, that is, if that portion were completely extirpated. In other words, the portion of the range need not be so important that even the species being in danger of extinction in that portion would be sufficient to cause the species in the remainder of the range to be endangered; rather, the *complete extirpation* (in a hypothetical future) of the species in that portion would be required to cause the species in the remainder of the range to be endangered.

The range of a species can theoretically be divided into portions in an infinite number of ways. However, there is no purpose in analyzing portions of the range that have no reasonable potential to be significant or in analyzing portions of the range in which there is no reasonable potential for the species to be endangered or threatened. To identify only those portions that warrant further consideration, we determine whether there is substantial information indicating that: (1) The portions may be "significant" *and* (2) the species may be in danger of extinction there or likely to become so within the foreseeable future. Depending on the biology of the species, its range, and the threats it faces, it might be more efficient for us to address the significance question first or the status question first. Thus, if we determine that a portion of the range is not "significant," we do not need to determine whether the species is endangered or threatened there; if we determine that the species is not endangered or threatened in a portion of its range, we do not need to determine if that portion is "significant." In practice, a key part of the determination that a species is in danger of extinction in a significant portion of its range is whether the threats are geographically concentrated in some way. If the threats to the species are essentially uniform throughout its range, no portion is likely to warrant further consideration. Moreover, if any concentration of threats to the species occurs only in portions of the species' range that clearly would not meet the biologically based definition of "significant," such portions will not warrant further consideration.

We consider the "range" of the island night lizard to be San Clemente, San Nicolas, and Santa Barbara Islands (including Sutil Island) of the California Channel

Islands.

We considered whether the threats facing the island night lizard might be different on San Clemente Island with approximately 99.85 percent of the population compared to San Nicolas and Santa Barbara Islands with, combined, approximately 0.15 percent of the population (Service 2012b). A detailed spatial evaluation of threats showed that the level of threat, and extent of protective measures, is different on San Clemente Island and San Nicolas Island, compared to Santa Barbara Island due to ownership and activities conducted by the Navy (Service 2012b, unpublished data). However, all substantial threats have been ameliorated from those islands, and the remaining potential threats to the island night lizard are actively managed for by the Navy through implementation of INRMPs, Federal Noxious Weed Act, and Soil Conservation and Domestic Allotment Act. On Santa Barbara Island there are no substantial threats, and the remaining potential threats receive protections provided through the implementation of NPS's management policies and the Channel Islands National Park Wildland FMP, in accordance with the Organic Act. It is our conclusion, based on our evaluation of the current potential threats to the island night lizard on San Clemente, San Nicolas, and Santa Barbara Islands (see **Summary of Factors Affecting the Species** section), that threats are neither sufficiently concentrated nor of sufficient magnitude to indicate the species is in danger of extinction on any island and thus it is likely to persist throughout its range.

**Summary of Finding**

According to 50 CFR 424.11(d), a species may be delisted if the best scientific and commercial data available substantiate that the species is neither endangered nor threatened because of: (1) Extinction, (2) recovery, or (3) error in the original data for classification of the species. We consider "recovery" to apply to the island night lizard because, since listing, all substantial threats to the lizard have been ameliorated. All remaining potential threats to the species and its habitat, with the exception of climate change for which there is not information on which to make accurate predictions, are currently managed through management plans (the Navy's INRMPs on San Clemente and San Nicolas Islands in accordance with the Sikes Act, Federal Noxious Weed Act, and Soil Conservation and Domestic Allotment Act; and the NPS's management policies in accordance with the Organic Act on Santa Barbara Island). Upon completion of this finding, a majority of all six primary objectives of the Recovery Plan have been fulfilled. Therefore, we find that the island night lizard no longer requires the protection of the Act and we propose removing the species from the List of Endangered and Threatened Wildlife.

**Effects of This Rule**

This rule, if made final, would revise 50 CFR 17.11(h) to remove the island night lizard from the List of Endangered and Threatened Wildlife. Because no critical habitat was designated for this species, this rule would not affect 50 CFR 17.95.

If this species is removed from the List of Endangered and Threatened Wildlife, the prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9 of the Act, would no longer apply. Removal of the island night lizard from the List of Threatened and Endangered Wildlife would relieve Federal agencies from the need to consult with us to ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of this species.

**Peer Review**

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (50 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule and the draft post-delisting monitoring (PDM) plan. The purpose of peer review is to ensure that decisions are based on scientifically sound data, assumptions, and analyses. We have invited these peer reviewers to comment during this comment period on this proposed rule and draft PDM plan, and the specific assumptions and conclusions regarding the proposed delisting. Accordingly, the final decision may differ from this proposal.

**Post-Delisting Monitoring Plan**

Section 4(g)(1) of the Act requires us, in cooperation with the States, to

implement a monitoring program for not less than 5 years for all species that have been recovered and delisted (50 CFR 17.11, 17.12). The purpose of this post-delisting monitoring (PDM) is to verify that a species remains secure from risk of extinction after it has been removed from the protections of the Act. The PDM is designed to detect the failure of any delisted species to sustain itself without the protective measures provided by the Act. If, at any time during the monitoring period, data indicate that protective status under the Act should be reinstated, we can initiate listing procedures, including, if appropriate, emergency listing under section 4(b)(7) of the Act. Section 4(g) of the Act explicitly requires us to cooperate with the States in development and implementation of PDM programs, but we remain responsible for compliance with section 4(g) and, therefore, must remain actively engaged in all phases of PDM. We also seek active participation of other entities that are expected to assume responsibilities for the species' conservation post-delisting.

*Post-Delisting Monitoring Plan Overview*

The Service has developed a draft PDM plan for the island night lizard in cooperation with the Navy and NPS. The PDM plan is designed to verify that the island night lizard remains secure from risk of extinction after removal from the list of federally threatened or endangered species by detecting changes in its status and habitat throughout its known range. With this notice, we are soliciting public comments and peer review on the draft PDM Plan including its objectives and procedures (see **Public Comments**

**Solicited**). All comments on the draft PDM plan from the public and peer reviewers will be considered and incorporated into the final PDM plan as appropriate. Please see the plan, available at *http://www.fws.gov/southwest/es/Library/*, *http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=C01M*, or *http://www.regulations.gov* for more details.

The draft PDM plan outlines monitoring that will take place for 5 years over a 9-year period (i.e., years 1, 3, 4, 7, and 9). The draft PDM Plan includes the following measures:

(1) Monitoring the overall health of the island night lizard populations on each island through trap capture rates and recruitment at previously established sampling sites. This monitoring will occur in all habitats for 9 years following delisting. Biologists will conduct density assessments using several methodologies including: pitfall traps, rock-turn surveys, and coverboards arranged in grid arrays or transects. Efforts will be made to sample all sites within each sampling period. Surveys to assess recruitment will be conducted in October for each sampling year.

(2) Monitoring high-quality habitat will occur twice throughout post-delisting monitoring to assess abundance and distribution of habitats on all islands. Recently completed island-wide habitat maps will be utilized as the baseline assessment to compare with post-delisting monitoring mapping efforts.

(3) Identifying thresholds that would trigger an extension of monitoring, alteration of management approach, or a status review will be established related to island night lizard density, recruitment, and habitat.

Additionally, we are recommending that land managers on each island conduct monitoring in previously unsampled areas on each island consisting of different habitats at least once during PDM with a focus on high-quality habitat. Within these new areas, we recommend using already established protocols to allow for comparison of newly sampled island night lizard densities and distribution with previously established sites for each island. We also recommend establishing identical protocols for each island to allow for comparison among islands. Lastly, we recommend that each island continue restoration efforts of high-quality island night lizard habitat to increase distribution and connectivity.

We also expect to monitor the commitments and actions of management plans implemented by the Navy and NPS, which manage potential threats to the island night lizard and its habitat, including the introduction and current persistence of nonnative plants, land use and development, erosion, and fire.

**Required Determinations**

*Clarity of The Rule*

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(a) Be logically organized,

(b) Use the active voice to address readers directly,

(c) Use clear language rather than jargon,

(d) Be divided into short sections and sentences, and

(e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the names of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

*Paperwork Reduction Act of 1995*

Office of Management and Budget (OMB) regulations at 5 CFR part 1320, which implement provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*), require that Federal agencies obtain approval from OMB before collecting information from the public. This rule does not contain any new collections of information that require

approval by OMB under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

*National Environmental Policy Act*

We determined we do not need to prepare an Environmental Assessment or an Environmental Impact Statement, as defined under the authority of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

*Government-to-Government Relationship with Tribes*

In concurrence with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951), Executive Order 13175, and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal tribes on a government-to-government basis. We have determined

that there are no tribal lands affected by this proposal.

## References Cited

A complete list of all references cited in this proposed rule is available on the Internet at *http://www.regulations.gov* or upon request from the Field Supervisor, Carlsbad Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section).

## Author

The primary author of this proposed rule is the Carlsbad Fish and Wildlife Office in Carlsbad, California (see **FOR FURTHER INFORMATION CONTACT**).

## List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

## Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

**PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

**§ 17.11 [Amended]**

2. Amend §17.11(h) by removing the entry for “Lizard, Island night” under “REPTILES” in the List of Endangered and Threatened Wildlife.

Dated: January 23, 2013

Signed: Rowan W. Gould

Acting Director, U.S. Fish and Wildlife Service

**Billing Code 4310-55**

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